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OCTOBER 2000

A dazzling display of Art Nouveau [PAGE 74]

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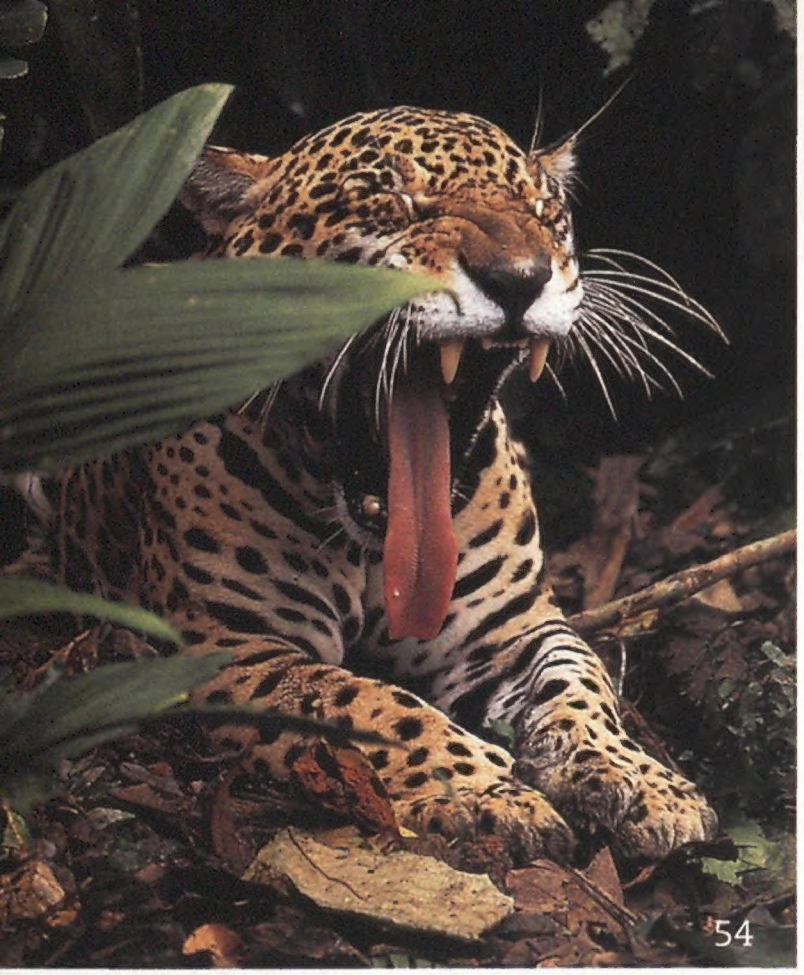

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departments

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Cover Working in silver gilt and ivory, Belgian artist Charles van der Stappen sculpted this work, *Sphinx mystérieux*, in 1897. Such depictions of females as fantasy creatures—part woman, part animal—were a common theme in Art Nouveau.
PHOTOGRAPH BY MUSÉES ROYAUX D'ART ET D'HISTOIRE, BRUSSELS

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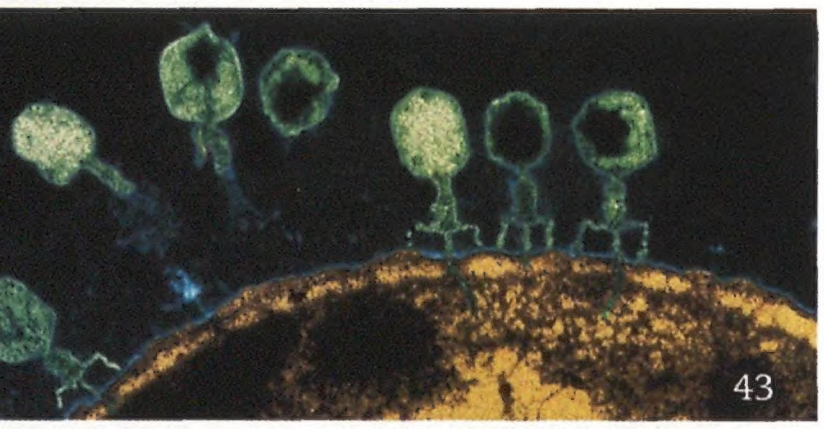

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The Impossible Job

A NOTE FROM THE SECRETARY

THE FIRST LADIES ARE TO BE JOINED BY THEIR husbands, and it's about time. For many decades, the Smithsonian has had an exhibition honoring the Presidential wives, but there's been nothing of comparable scale to recognize their industrious spouses, an odd omission indeed. Soon after Election Day, we'll make amends when the National Museum of American History opens a new permanent exhibition entitled "The American Presidency: A Glorious Burden."

The subtitle recalls Thomas Jefferson's 1797 take on the Presidency as a "splendid misery." Jefferson had not yet become the third person to hold the office, and yet the nature of the job was already clear to him. In fact, George Washington himself, in the very first Presidential inaugural address, had guessed what lay ahead. He spoke of "the magnitude and difficulty of the trust," which made him all the more conscious of his own deficiencies. His modesty was characteristic, though modesty, in his case, was unnecessary. But he was right to hesitate before the imagined rigors of the office, for it makes demands that are plainly unreasonable.

George Washington foresaw the "difficulty of the trust" of the Presidency.

Jefferson was not the only one of Washington's successors to echo his sentiments. John Quincy Adams, for example, could "scarcely conceive a more harassing, wearying, teasing condition of existence" than the Presidency. Andrew Jackson called the office "dignified slavery," and Warren Harding complained: "It's Hell! No other word to describe it." Woodrow Wilson, some years before trying it himself, put it this way: "Men of ordinary physique and discretion cannot be President and live."

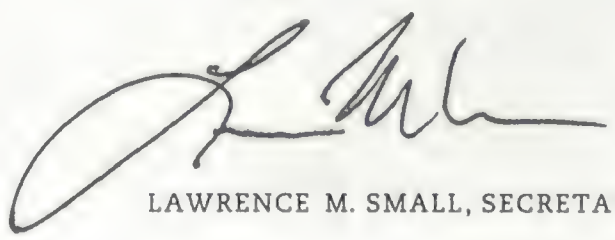
The American Presidency is a position for which no training can be adequate, no preparation complete, no counsel sufficient. It is an office that outstrips anyone's ability to negotiate the ever-widening circle of its responsibilities. The Presidency asks mere human beings to do a job that, by all reasonable calculation, should be beyond human capacity. And yet it is a job individuals avidly seek, and one at which some have even excelled.

We ask an astonishing amount of our Presidents. We have expected them to be father, brother, general, diplomat, arbitrator, economist, pitchman, publicist, cheerleader and a dozen things more. We take for granted that the same person who has the qualities to command armies and deploy an arsenal of awful force will also be available to end a school year or launch a baseball season, to lead our common celebrations and shoulder our common griefs. And, with all that, we expect our Presidents to submit to the nonstop second-guessing that's the lifeblood of the democratic process.

When we mined the riches of the Smithsonian's collections to portray the nature of the Presidency, we were determined to show the office as at once incomparably grand and irreducibly human. Happily, the collections are filled with objects that reflect the humanity of our Presidents, objects they used and moved among and that furnished their eras. So though the new exhibition considers the office and the men who have held it from many perspectives—historical, political, cultural, social—it puts an especially welcome emphasis on the human dimension.

That's as it should be. For, in the end, Presidents must fall back on their own humanity and their imperfect knowledge to make decisions on which the fortunes of the world may turn. It's then that character—sure instincts, a steady inner moral compass, a capacity for prudent risk, a predisposition to courage and compassion—will tell. Perhaps our successful Presidents had intellect on their side (or to their side, in the ranks of advisers), and surely they had luck, but above all they had character to get them through the urgent hours.

The new exhibition will make plain our impossible expectations of the office of the Presidency, invite us to admire the individuals who, against all odds, met the expectations, and persuade us perhaps to look more kindly on those who fell short.



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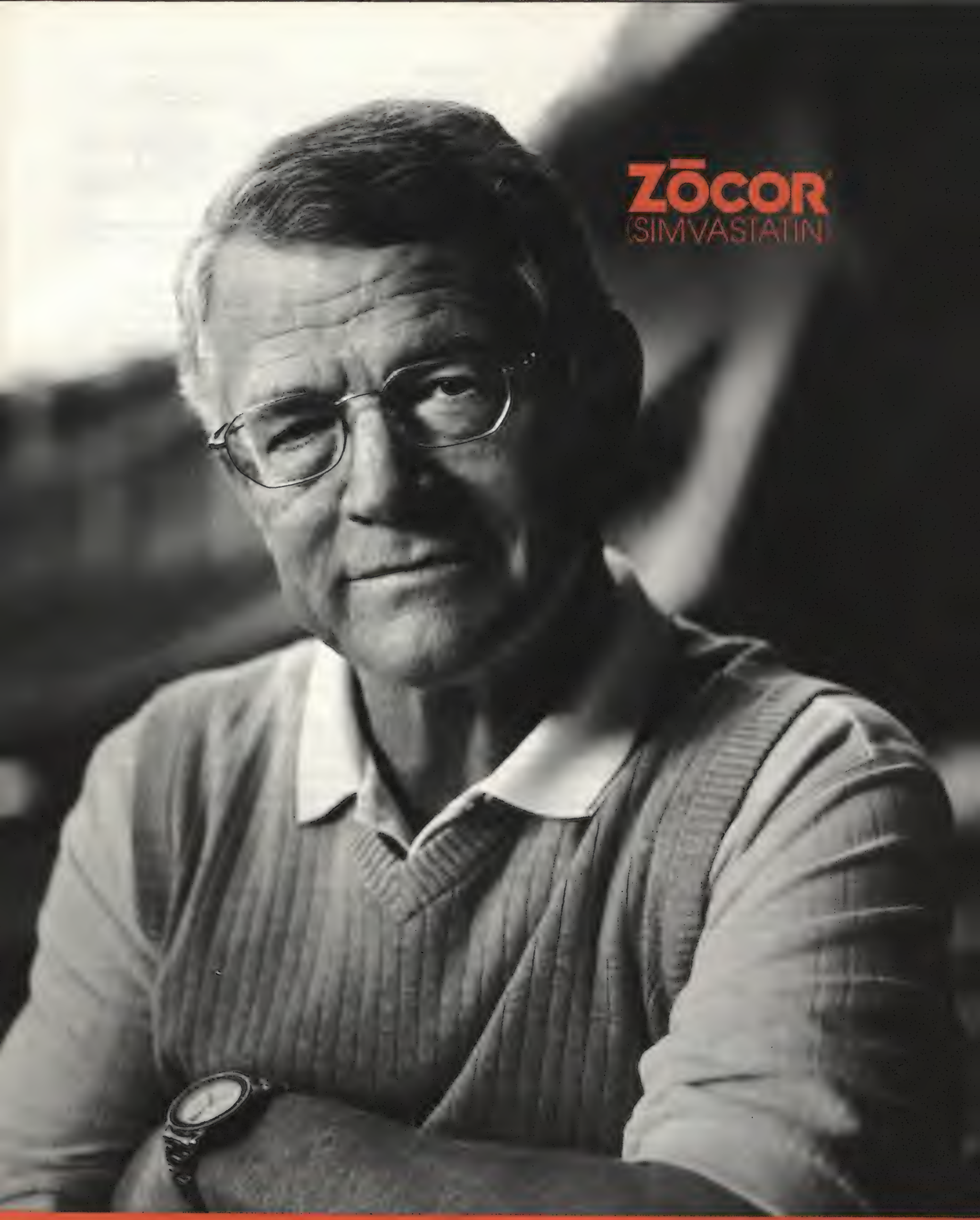

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Women who are or may become pregnant: Pregnant women should not take ZOCOR because it may harm the fetus. **Women of childbearing age should not take ZOCOR unless it is highly unlikely that they will become pregnant.** If a woman does become pregnant while on ZOCOR, she should stop taking the drug and talk to her doctor at once.

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WARNINGS

Muscle: Tell your doctor right away if you experience any unexplained muscle pain, tenderness, or weakness at any time during treatment with ZOCOR so your doctor can decide if ZOCOR should be stopped. Some patients may have muscle pain or weakness while taking ZOCOR. Rarely, this can include muscle breakdown resulting in kidney damage. The risk of muscle breakdown is greater in patients taking certain other drugs along with ZOCOR, such as the lipid-lowering drug Lopid (gemfibrozil), and other fibrates; lipid-lowering doses of niacin (nicotinic acid); Sandimmune (cyclosporine); itraconazole, ketoconazole, and other azole antifungal drugs; the antibiotics erythromycin and clarithromycin; HIV protease inhibitors; and the antidepressant nefazodone. Interruption of therapy with ZOCOR should be considered if you are going to take an azole antifungal medication, such as itraconazole, or macrolide antibiotics, such as erythromycin. Patients using ZOCOR along with any of these other drugs should be carefully monitored by their physician. The risk of muscle breakdown is greater in patients with kidney problems or diabetes.

Because there are risks in combining therapy with ZOCOR with the drugs listed above, your doctor should carefully weigh the potential benefits and risks. He or she should also carefully monitor patients for any muscle pain, tenderness, or weakness, particularly during the initial months of therapy and if the dose of either drug is increased. Your doctor also may monitor the level of certain muscle enzymes in your body, but there is no assurance that such monitoring will prevent the occurrence of severe muscle disease.

If you have conditions that can increase your risk of muscle breakdown, which in turn can cause kidney damage, your doctor should temporarily withhold or stop ZOCOR. Also, since there are no known adverse consequences of briefly stopping therapy with ZOCOR, treatment should be stopped a few days before elective major surgery and when any major acute medical or surgical condition occurs. Discuss this with your doctor, who can explain these conditions to you.

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Tell your doctor about any liver disease you may have had in the past and about how much alcohol you consume. ZOCOR should be used with caution in patients who consume large amounts of alcohol.

PRECAUTIONS

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Drug Interactions: Because of possible serious drug interactions, it is important to tell your doctor what other drugs you are taking, including those obtained without a prescription.

ZOCOR can interact with cyclosporine (Sandimmune), itraconazole, ketoconazole, Lopid, niacin, erythromycin, clarithromycin, HIV protease inhibitors, and nefazodone. (See WARNINGS, Muscle.)

Some patients taking lipid-lowering agents similar to ZOCOR and coumarin anticoagulants (a type of blood thinner) have experienced bleeding and/or increased blood clotting time. Patients taking these medicines should have their blood tested before starting therapy with ZOCOR and should continue to be monitored.

Central Nervous System Toxicity; Cancer, Mutations, Impairment of Fertility: Like most prescription drugs, ZOCOR was required to be tested on animals before it was marketed for human use. Often these tests were designed to achieve higher drug concentrations than humans achieve at recommended dosing. In some tests, the animals had damage to the nerves in the central nervous system. In studies of mice with high doses of ZOCOR, the likelihood of certain types of cancerous tumors increased. No evidence of mutations of or damage to genetic material has been seen. In one study with ZOCOR, there was decreased fertility in male rats.

Pregnancy: Pregnant women should not take ZOCOR because it may harm the fetus.

Safety in pregnancy has not been established. In studies with lipid-lowering agents similar to ZOCOR, there have been rare reports of birth defects of the skeleton and digestive system. Therefore, women of childbearing age should not take ZOCOR unless it is highly unlikely they will become pregnant. If a woman does become pregnant while taking ZOCOR, she should stop taking the drug and talk to her doctor at once. The active ingredient of ZOCOR did not cause birth defects in rats at 3 times the human dose or in rabbits at 3 times the human dose.

Nursing Mothers: Drugs taken by nursing mothers may be present in their breast milk. Because of the potential for serious adverse reactions in nursing infants, a woman taking ZOCOR should not breast-feed. (See WHEN ZOCOR SHOULD NOT BE USED.)

Pediatric Use: ZOCOR is not recommended for children or patients under 20 years of age.

SIDE EFFECTS

Most patients tolerate treatment with ZOCOR well; however, like all prescription drugs, ZOCOR can cause side effects, and some of them can be serious. Side effects that do occur are usually mild and short-lived. Only your doctor can weigh the risks versus the benefits of any prescription drug. In clinical studies with ZOCOR, less than 1.5% of patients dropped out of the studies because of side effects. In a large, long-term study, patients taking ZOCOR experienced similar side effects to those patients taking placebo (sugar pills). Some of the side effects that have been reported with ZOCOR or related drugs are listed below. This list is not complete. Be sure to ask your doctor about side effects before taking ZOCOR and to discuss any side effects that occur.

Digestive System: Constipation, diarrhea, upset stomach, gas, heartburn, stomach pain/cramps, anorexia, loss of appetite, nausea, inflammation of the pancreas, hepatitis, jaundice, fatty changes in the liver, and, rarely, severe liver damage and failure, cirrhosis, and liver cancer.

Muscle, Skeletal: Muscle cramps, aches, pain, and weakness; joint pain; muscle breakdown.

Nervous System: Dizziness, headache, insomnia, tingling, memory loss, damage to nerves causing weakness and/or loss of sensation and/or abnormal sensations, anxiety, depression, tremor, loss of balance, psychic disturbances.

Skin: Rash, itching, hair loss, dryness, nodules, discoloration.

Eye/Senses: Blurred vision, altered taste sensation, progression of cataracts, eye muscle weakness.

Hypersensitivity (Allergic) Reactions: On rare occasions, a wide variety of symptoms have been reported to occur either alone or together in groups (referred to as a syndrome) that appeared to be based on allergic-type reactions, which may rarely be fatal. These have included one or more of the following: a severe generalized reaction that may include shortness of breath, wheezing, digestive symptoms, and low blood pressure and even shock; an allergic reaction with swelling of the face, lips, tongue and/or throat with difficulty swallowing or breathing; symptoms mimicking lupus (a disorder in which a person's immune system may attack parts of his or her own body); severe muscle and blood vessel inflammation; bruises; various disorders of blood cells (that could result in anemia, infection, or blood clotting problems) or abnormal blood tests; inflamed or painful joints; hives; fatigue and weakness; sensitivity to sunlight; fever, chills; flushing; difficulty breathing; and severe skin disorders that vary from rash to a serious burn-like shedding of skin all over the body, including mucous membranes such as the lining of the mouth.

Other: Loss of sexual desire, breast enlargement, impotence.

Laboratory Tests: Liver function test abnormalities including elevated alkaline phosphatase and bilirubin; thyroid function abnormalities.

NOTE: This summary provides important information about ZOCOR. If you would like more information, ask your doctor or pharmacist to let you read the complete prescribing information and then discuss it with them.

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RINGTAIL CATS

BIL GILBERT'S ARTICLE "RINGTAILS Like To Be Appreciated," in your August 2000 issue, took me wafting back to my 1991 rafting and camping trip on the Colorado River. On a clear, moonlit night, I suddenly awoke sleepy eye to bright eye with an adorable mammal with the most luscious of tails who was eating my M&Ms. The curious, alert, easygoing creature had a strap of my clothing draped over one shoulder and was repeatedly reaching his forepaw into the large bag of candy inside my duffel bag. He padded away as I snapped pictures of him, which were destroyed when my camera, the remaining M&Ms and I slipped into a canyon stream. All I had was my fabulous tale until your article described my ringtail cat to a T.

Marjory B. Stickler
Carlisle, Massachusetts

MANY YEARS AGO, WHILE VISITING the Grand Canyon, I had dinner at a rustic hotel's Tex-Mex restaurant. I glanced up at the ceiling and a pair of huge, bright eyes were peering back at me. As I called this to my waitress's attention, the furry creature climbed down, hung over a tray of leftovers, grabbed a tidbit, daintily ate it and climbed back up to his ledge. The wait staff took it all in stride, being careful to put food still to be served on racks in the center of the room. The ringtail cats, or "canyon cats" as they called them, were permitted food on trays against the walls. I'm sure the sideshow has since been canceled in the name of sanitation, but I'm glad I saw it performed by those "world-class cute" creatures.

Mary Alice Lord
Brunswick, Georgia

ROBOTUNA PROJECT

I HAVE CAUGHT AND CLEANED A LOT of fish in my day, but something is fishy about Peter Menzel's closing picture in Douglas Whynott's "Something's Fishy about this Robot." Why did the scientists put the VCUUV's scales on backward?

Bob Kiser
Memphis, Tennessee

According to Jamie Anderson, who developed the VCUUV (Vorticity Control Unmanned Undersea Vehicle), the scales aren't intended to mimic the scales of a fish. They provide a rigid yet flexible dermal sub-layer over the ribs. By orienting the scales backward, the scientists can more easily stretch a tight neoprene skin over the robotic tuna. The scales, in the reverse direction, are less apt to bind with each other as the tail oscillates. The final configuration is hydrodynamically smooth. Ed.

GAVRILO PRINCIP

ON YOUR OPENING SPREAD, PETAR Princip is not lighting a candle; he is lighting a "lampada" beneath an icon of St. George, near the portrait of his cousin, revolutionary Gavrilo. Lampadas usually have a wrapped wick sitting in oil, and in the Orthodox Church, they continuously illuminate an icon and also serve to symbolize the love of Christ, who is "the light of the world."

Peter D. Nelson
Fly Creek, New York

POINTS OF INTEREST

THANK YOU FOR THE COLUMN BY Rudolph Chelminski about the last schoolhouse. I lived on a farm in northeast Iowa about one and a half miles from our one-room schoolhouse. Enrollment ranged from 15 to 20 students in first through eighth grades. Students had to be at least 6 years old and attend full days.

Formal education was a full-time project: I helped carry drinking water from a nearby farm; other students helped the teacher sweep the floor and shovel snow. In those halcyon days, there was no violence or drugs or litigation filed against the teacher or school district. The quality of education was very high, and by fourth grade I had mastered all of the basic courses. Most of the students ended their formal education with an eighth-grade diploma, since their parents believed this was sufficient.

Our 1866 schoolhouse and all of its contents (including my school records) and equipment were preserved and moved to become part of a small museum complex in Froelich, Iowa, where John Froelich invented the first gasoline-powered farm tractor.

James Hupfer
Little Rock, Arkansas

RUDOLPH CHELMINSKI PAINTED A very accurate picture in "The Last Schoolhouse." For the most part, his school days were mine. Our mothers also made us chicken-feed sack dresses, and I helped my grandmother make her awful soap that left us clean but raw. At Johnson School in Criders Corners, Pennsylvania, school did not begin until the end of September, and it concluded at the end of April. This was a farming community, and the children had to help with the fall harvest and spring planting, bringing about the compressed school year. Our teacher was a slight young woman who taught all subjects with minimal or antiquated equipment while keeping some of the older, rowdy boys in order.

Some of our books were the same copies that my father had used when he attended the school. To update maps in the geography books, the teacher redrew the boundaries. We had the traditional potbellied stove, a hand pump for water and the two "necessaries" out back. And yes, I had to walk two miles, round-trip, from home to school, except on bad days when a neighbor lady drove her son and me in her Model A. It was a safer world then, and my parents trusted me to get where I was going and home again, and they could trust people in general to let me do so.

In my district, we have marvelous labs and exotic courses and equipment in our new big schools, which serve more than 7,000 students in our still-growing school district, but we can never have the community involvement that the small rural schools of my youth provided. The Amish and some remote communities still operate in this manner, but for the

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DOWJONES
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most part, education at all levels has become so removed from family life, except for transporting our children to and from activities, that it has become impersonal and authoritative.

Joyce M. Bessor
Zelienople, Pennsylvania

CENTRAL PARK'S GREAT LAWN

I GREATLY ENJOYED STEVE KEMPER'S article "High on Grass." What type of grass seed does Maria Hernandez use on the Great Lawn of New York's Central Park?

Jerry Kessler
Frederick, Maryland

The Lawn was resodded with 500,000 square feet of Kentucky bluegrass. Ed.

YOU MISSPELLED THE LAST NAME OF Frederick Law Olmsted.

Louise Hotaling
Seattle, Washington

THE GREAT LAWN WAS BUILT ON THE site of the Receiving Reservoir, in an area known as Yorkville, not on the old Croton Reservoir as you stated.

Jane Sorenson
Brooklyn, New York

LONGRIFLES

IN JAMES CONAWAY'S "RENAISSANCE of the Longrifle," the reference to rifles used in the Plains and Rocky Mountain fur trade should have read the "early 1800s," not "early 1880s."

Colton W. Meyer
Walnut Creek, California

THE LAST PAGE

I ENJOYED ROBB WHITE'S "SIGNS OF the Times," and I think I can shed some light on "balled peanus." I once went to a local baseball game near Gainesville, Florida, and bought a bag of peanuts from a stadium vendor. The bag was soggy and the contents were dripping wet. But the boiled peanuts were salty and pretty good.

Maxine G. Doyle
Olalla, Washington

WRITE TO SMITHSONIAN

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THE NISSAN MAXIMA. *There is a person who thought about the feel of the knobs. A person who pored over thousands of typefaces for the gauges before settling on the one that was easy to read in both day and night. There was even a person who scoured the globe in search of a special metal, whose heat-resistant properties would improve the Maxima's performance. (By the way, we found this special alloy in a jet aircraft engine.) In a word, no nut, bolt or swatch of leather was left unturned in our quest to make the Nissan Maxima the most trouble-free, most driver-friendly sedan ever to saunter down the left lane. A fact which didn't go unnoticed by the folks at* The New York Times, *who wrote, "...the 2000 Maxima has attention to detail that some luxury cars should imitate."* More details? Call: 800-235-8880. Or click: NissanDriven.com. The Nissan Maxima.* **CARS LIKE IT: 0**

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NISSAN

DRIVEN.

POINTS OF INTEREST

Welcome to Jungle Jim's

YOU DON'T JUST SHOP AT THIS INTERNATIONAL FOOD MART IN DEEPEST OHIO—YOU GO ON SAFARI

BY BRUCE WATSON

Suitably attired atop one of his elephants, grocer Jim Bonaminio greets customers outside his huge "farmers market."

HUNGRY AGAIN. REALLY HUNGRY. I scan the refrigerator: plain bagels, past their prime; slices of American cheese, individually wrapped to keep flavor out; imitation grape jelly.

Guess it's time to go shopping. But I'm tired of trying to please two kids who won't eat anything spicier than Spam. I'm in the mood for something exotic. Instead of plain meat, I think I'll get a few kangaroo steaks. In lieu of potatoes, how about yucca from Peru? Drooling on, I fantasize about South African guava halves. In heavy syrup, of course. I've always loved the creamy Italian dessert tiramisu. Maybe I'll pick up a six-pack or two.

With visions of German marzipan piggies dancing in my head, I take off for that well-known center of groceries from around the globe, Ohio. There, a half-hour north of Cincinnati, alongside car dealerships and strip malls, the whole world can be found under one roof. Whether it's kumquats or litchi nuts, strange seaweed or everyday lutefisk, if it isn't at Jungle Jim's International Farmers Market, it must not be edible.

The average supermarket may set aside an aisle or two for Thai noodles, Irish tea and jars of mango chutney, but at Jungle Jim's, more than 100,000 items from 60 countries are spread across acres of concrete. Jim's has thousands of imported canned goods,

ALL: KEN FRICK

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and meats ranging from ostrich to boar to rattlesnake. More than 20 aisles are devoted to individual countries whose wares include scores of strange sauces and bags of gritty grains. Jim's has 1,400 meats and cheeses, 800 beers, 100 kinds of honey.

Driving into Fairfield, Ohio, on Highway 4, I see three life-size fiberglass elephants standing in a blue concrete pool in front of a one-story stone facade. Gorilla statues perch on nearby rocks. Towering faux giraffes look down as I approach the entrance. Then a smiling voice says, "Hi, boys and girls! Welcome to Jungle Jim's!"

Inside, I find Elvis, "the King." Standing on a bamboo stage, guitar in hand, the eight-foot-tall mechanical lion is crooning "All Shook Up." Following colorful animal tracks painted on the floor, I head deeper into the mysterious jungle.

This wacky, multicultural cornucopia is the brainchild of Jim Bonaminio, a determined entrepreneur who has been in sales since his mother pushed him around in a baby buggy while selling Fuller brushes in

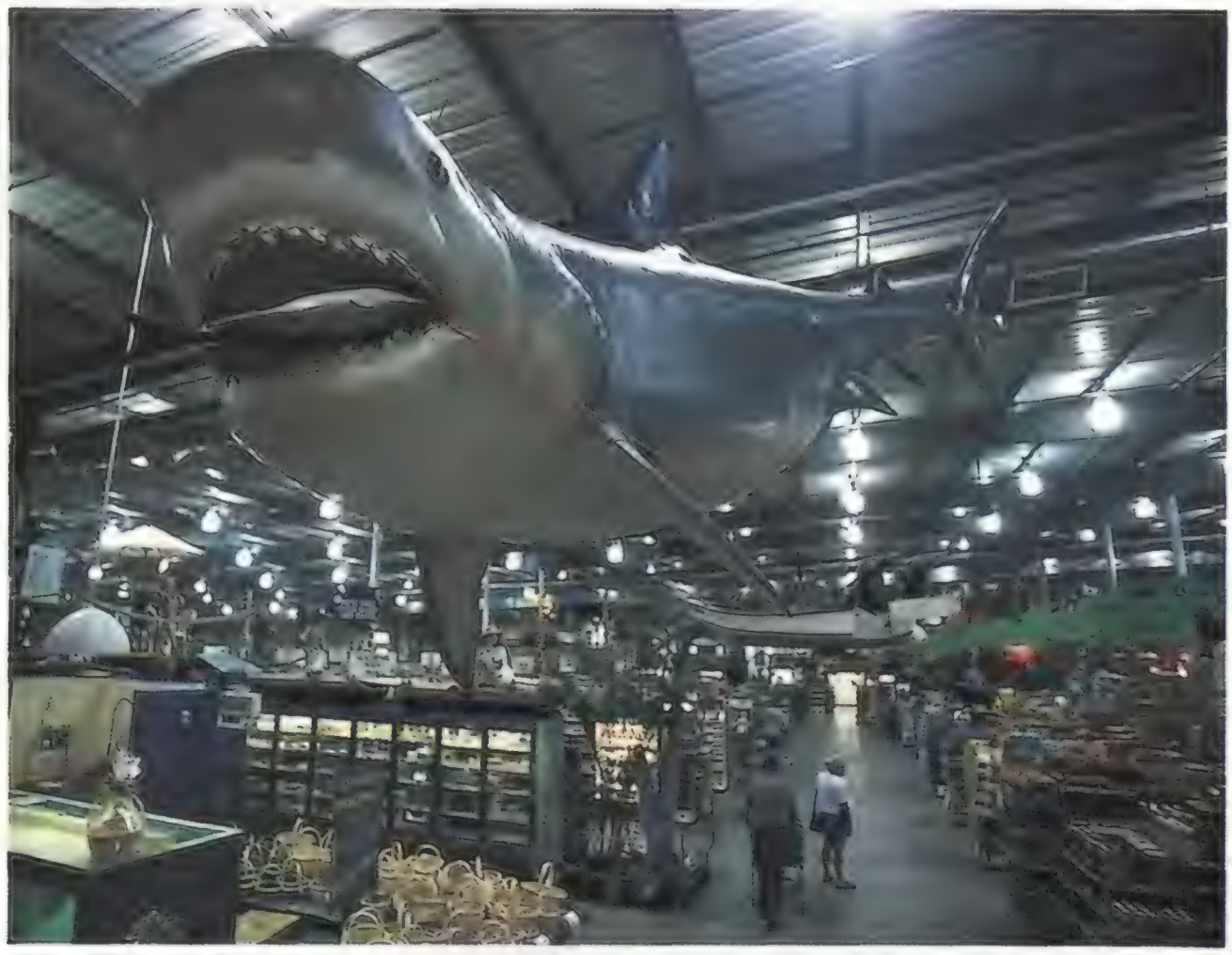
Following colorful animal tracks painted on the floor, I head deeper into the mysterious jungle.

Cleveland. A can-do kid, Jim peddled dried cattails for a penny apiece, and washed golf balls before selling them back to the golfers who'd lost them on the course. In his late teens, he turned to produce, working 18-hour days at roadside stands he built from old dime-store display tables. "A salesman's got to dream," Arthur Miller wrote in *Death of a Salesman*. And Jim Bonaminio always dreamed of owning a real market.

In 1975 he bought a lot in Fairfield and built a small produce store on it. He already had his nickname. "Daddy, who's that man?" a little girl asked one day when she saw Jim emerging from a walk-in freezer at her father's warehouse, steam clinging to his broad shoulders like mist in a rain forest. "Oh, him. He's Jungle Jim." The name stuck. For the next dozen years, Jim's store grew beyond produce to embrace a full line of domestic groceries. Then, in 1988, Bonaminio began to leap borders.

"I never thought about becoming an international market," he tells me as we sit in his office overlooking the aisles, "until I started going into specialty shops in Chicago, places with 800 cheeses or 100 kinds of olives. I'd come back here and say, 'Why can't we have that?' I wanted to be the best in each food department."

He probably is. Many supermarkets sell Ugli fruit, the Jamaican tangelo. But Jim's also has durian, big spiky fruit from Southeast Asia that have to be kept in the freezer lest they stink up the entire produce section (SMITHSONIAN, September 1999). I can get a few different rices at my local market, but Jim's has a Great Wall of Rice, two dozen varieties in 25-, 50- and 100-pound sacks, stacked like dog food, filling one wall to the ceiling. And while the music you listen to in other markets is as canned as the tuna, Jim puts a little pizzazz into his. Off in the distance, I hear "The Lion Sleeps Tonight." Later, while sampling the ravioli, I enjoy being serenaded by



At the produce department (above) the "welcome wall" depicts costumed figures from different countries. A 17-foot-long stuffed shark hangs menacingly above the fresh seafood section (right).

19,500 ACRES IS A LOT OF OPEN SPACE.

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Transfixed, a youngster watches Elvis, the mechanical lion, sing his namesake's songs.

Luigi, the Italian chef. He's mechanical, of course.

Along with being an impresario of foods, Jungle Jim is also a collector of junk. When he's not working 80 hours a week, he says, "I go junkin'." His collection fills two barns next to his store. Spilling into the market—which now covers four acres—Jim's junk helps give this cosmopolitan emporium the kitschy atmosphere of a yard sale: a 40-foot cabin cruiser fronting the seafood section, a full-sized ricksha perched above the Chinese-food section, an Amish buggy next to the meat department.

It's time to start shopping. I buy Queso Manchego, a hard cheese from Spain, and some salted watermelon seeds from the Middle East. Going Down Under, I pick up Koala Tea from Australia. Tightening my veldt, I find canned youngberry jam from South Africa. Turning tropical, I buy some tamarind from Thailand.

Usually it's unwise to grocery shop when you're hungry, but at Jungle Jim's it pays because of all the free samples. I try several cheeses, Luigi's ravioli and an Italian wedding soup. Then, up against the Great Wall of Rice, I check out several hot sauces ranging from "mild" to "inferno."

Just because the food at Jungle Jim's is more interesting than the stuff my kids eat doesn't mean I have to like all of it. Monkey gland sauce from South Africa? No thanks. Swamp cabbage pickles from Florida? Sorry, but I'm allergic to anything grown in a swamp. A can of green boiled peanuts? I prefer my peanuts any way but boiled. And although I *might* like the Asian produce—lemongrass, daikon radishes and some black rope of a root—I'm afraid that after eating it I might never be hungry again.

According to Jungle Jim, recent waves of immigration have brought many new customers to his market. If America is a melting pot, Jungle Jim's is a multicultural salad bowl. In the cheese sections, downwind from the Gorgonzola, I hear a man and a woman speak French, pricing Brie and Boursin. I hear Hindi in the Indian aisle, Spanish near the Mexican mole sauce, Japanese at the sushi bar.

"Back when I started putting international foods here, most American shoppers didn't even know what romaine lettuce was," Jim recalls. "To them, *that* was exotic." A typical week sees tens of thousands of shoppers pass through the market. Get there early on Saturdays and Sundays. And for those of us who are still learning to venture beyond meat and potatoes, Jungle Jim's offers cooking classes in several cuisines. Yet when it comes to foreign foods, many of Jim's customers need no introduction.

Growing up in India, Falguni Oza learned how to cook samo, an Indian rice. She boils it, adds green chile, ginger and sour yogurt. Oza could buy samo at the Indian store in Sycamore, Ohio, where her husband, Rashmi, is a chemical engineer, but then she'd have to make a separate trip to Jungle Jim's for the Belgian chocolates sitting in her cart. Over in the Asian section, Lisa Chu has come all the way from Louisville, Kentucky, 125 miles away, to fill her cart with things she says she couldn't buy anywhere else, including pea tips, galong and Asian yali pears. Meanwhile, Donna Spenny has her cart filled with French cheeses, ground buffalo meat and, true to her heartland heritage, Stove Top Stuffing Mix. Spenny is an adventurous shopper. "If something looks good, I'll give it a try," she tells me.

After three hours on safari, I follow the animal tracks to the checkout counter. Elvis is still singing "All Shook Up," and when I find out I've spent $128, I'm pretty shook up too; that ought to be enough to put some spice in my family's meals for a while. Back home, my kids find the blood oranges "gross," yet youngberry jam passes the test in peanut butter and jelly sandwiches. But wait! I forgot the kangaroo meat! And the guava halves! And how could I have come home without Creole hot pepper sauce from Dominica? Oh well. I guess I'll just have to get them on my next shopping trip to the jungle.

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THE OBJECT AT HAND

Libba Cotten's Guitar

LEFT-HANDED, SHE TAUGHT HERSELF TO PLAY, WROTE THE FOLK CLASSIC "FREIGHT TRAIN" AND SANG INTO HER 90S

BY MARIKA CARLEY

Elizabeth "Libba" Cotten won a Grammy Award in 1985 for the music on her album "Elizabeth Cotten Live!" She began her career as a guitarist and singer in her 60s.

BRIAN LANKER

THIS WORN GUITAR HAS SOME curious scratch marks around the sound hole, the result of its owner's distinctive way of playing. She was left-handed but always played a regular right-handed guitar, strumming it upside down.

The woman famous for that fingering style was Elizabeth "Libba" Cotten—a folksinger best known for the song "Freight Train," written in 1904 when she was just 11 years old. Cotten's signature song, it was eventually recorded by Peter, Paul and Mary, the Grateful Dead and Pete Seeger. But all of that didn't happen, and the general public did not get to hear it—or her—until the 1950s.

Cotten was born in Chapel Hill, North Carolina, in 1893. Her parents, George and Louisa Nevills, couldn't agree on what to call the child, so they never did get around to giving her a first name. When the teacher asked her name on the first day of school, Cotten said, "Elizabeth," because it sounded good to her.

Though she was surrounded by music as a child—singing spirituals with her mother and uncles—she never learned to read or write music. "Everything I play for y'all tonight, I give myself credit 'cause nobody did help me," Cotten told an audience on her 1985 Grammy Award-winning recording, "Elizabeth Cotten Live!" At age 8 she taught herself to play the banjo by borrowing her right-handed brother's after he went to work. Being left-handed, she learned to do her fingering upside down.

When her brother left home to start life on his own, Cotten was a preteen and desperate to continue playing. She started looking for work just so she could buy a guitar.

Eventually, she landed a job babysitting and doing housework. Her take-home pay was 75 cents a month. After five months on the job, she bought a guitar at the bargain rate of $3.75—that was all she had earned. After that she said, "Poor thing [mother] didn't get any more rest."

Cotten only needed to hear a tune once or twice to learn it, but she never played a song quite the same way twice. The picking styles and bass runs developed by Cotten before her teens have become standard patterns for folk guitar.

For Southern blacks and their children, trains represented a link to the North, an opportunity to flee poverty and prejudice in the South. That theme

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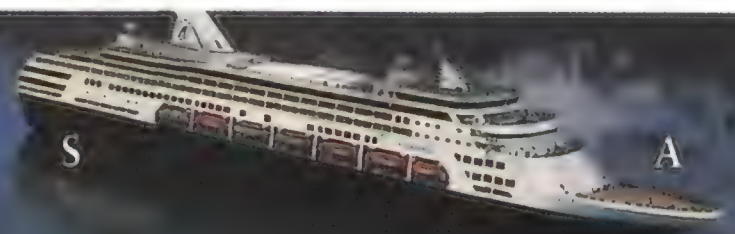

OCEANS APART

of escape echoes in the words of the 11-year-old Cotten's ballad: "Freight train freight train run so fast, / Freight train freight train run so fast / Please don't tell what train I'm on / They won't know what route I've gone."

At 13 or 14, Cotten was baptized in the Baptist church—and was persuaded by the deacons to give up her "devil's" music. Only itinerants, criminals, prostitutes and other outcasts played the blues, they told her. "I declare," she later confided, "I don't see where there's so much sin in it." Still, for many years Cotten would not so much as pick up a banjo or guitar.

When she was 15, she met Frank Cotten at church and, after a short courtship, eloped with him. A year or so later, Frank moved to New York to start the first black-owned chauffeur business in the city. Elizabeth Cotten soon followed with their daughter, Lillie. Although the couple shared a comfortable life, once Lillie had grown up and moved away, Cotten divorced her husband and moved to Washington, D.C. to be near her daughter. There, she worked at several jobs, including one at Lansburgh's Department Store.

One providential day in the mid-1940s, Ruth Crawford Seeger stopped by the store, shopping for dolls with her two daughters. The older girl, Peggy, wandered away. Cotten found the girl in another department, frightened and in tears. When she returned Peggy to her grateful mother, Ruth Seeger handed Cotten her phone number. "If you ever decide to stop working here," she said, "give me a call." Within a few months, Cotten was coming to the Seeger home in Chevy Chase, Maryland, once a week to cook and do the ironing.

There, Cotten found herself surrounded by music once again. Ruth, stepmother of famous folksinger and activist Pete Seeger, taught piano; Peggy and her brother Mike were learning guitar. The family patriarch, Charles Seeger, was a noted ethnomusicologist. While Ruth gave piano lessons, Cotten would borrow the family guitar and play.

Elizabeth Cotten demonstrates the style she adopted as a child when she taught herself to play left-handed. She holds the guitar upside down, picking with her left hand.

One afternoon Peggy heard Cotten singing "Freight Train" and asked to learn it. At the time, Ruth was compiling a collection of children's folk songs and included one by Cotten. Encouraged, Cotten began to put together more new songs and, with the Seegers' help, began occasionally singing and playing in public.

In the mid-1950s, a grown-up Peggy Seeger sang "Freight Train" during a concert tour in England, and the song was soon recorded—without permission or credit—by a British singer. It became a hit in Britain, and the furor over the songwriting credit and royalties helped create a demand for Libba Cotten's music. Her first album, "Negro Folksongs and Tunes," was cut in 1958 on the Folkways label, which the Smithsonian Institution acquired in 1987.

Over the years, Cotten played concerts and was on the program at the 1964 and 1968 Newport Folk Festivals. But despite her success as a performer, she continued to work her "day job" as a housekeeper until the 1970s. She didn't reach the top of her career until her mid-80s, and she was in her early 90s when she won the Grammy Award for Best Folk Performance, only two years before her death in 1987.

Pete Seeger described Cotten's stage persona at one of her 1968 concerts: "She walked gravely to the microphone, sat down and started picking the guitar. It was a simple tune, and repeated itself over and over with only a few modest variations. But she did it superbly, effortlessly."

Many honors came to Cotten in the last 15 years of her life. In 1972 she received the Burl Ives Award for exceptional contributions to folk music. In 1984, as an innovator in the field of folk arts, she was made a National Heritage Fellow by the National Endowment for the Arts. She appears in the book *I Dream a World*, a collection of photographs of 75 influential African-American women. A year after her death, the Smithsonian honored Cotten by inducting one of her guitars into its collections at a special ceremony.

Mike Seeger once said that Cotten was "one of those people who's bigger than the tradition she represents." On recordings, her folksy, raspy alto and delicate guitar playing are reminiscent of a dear grandmother's serenade: the sound warm and familiar, yet of an era long gone.

BETTMANN/CORBIS

BRITAIN

BRITAIN Reinvented

A Cultural Renaissance is Transforming Britain's Cities

Bridges have always been potent symbols. But none more so than the Millennium Bridge, the pedestrian walkway that cuts a clean arc across the Thames River, joining not just the two physical sides of London but also its past and present. On the north bank stands the mighty 300-year-old landmark of St. Paul's Cathedral, dominating the jagged skyline of The City. On the other side, the Tate Modern is a glass-gleaming vision of the future and the latest addition to the capital's cultural pantheon. Just opened in May 2000, this former power station has been reborn as one of the foremost museums of modern and contemporary art in the world.

"Perpetual modernness is the measure of merit in every work of art."— Ralph Waldo Emerson

But the Millennium Bridge symbolizes more than London's cultural rebirth. Catalyzed by the arrival of the third millennium, the same daring ingenuity and vision is transforming the face of Britain's cities nationwide. Over £5 billion has been spent so far on modernizing the old institutions, laying on new exhibits, opening unique and technologically advanced attractions—giving visitors the opportunity to see Britain in a whole new way.

All images courtesy of The British Tourist Authority. Clockwise from top: *The Millennium Bridge takes pedestrians from the old and venerable to the new and futuristic; the Lowry, Manchester's new architectural and cultural wonder on Salford Quays; carrying passengers on breathtaking circles, London's 400-foot-high BA London Eye.*

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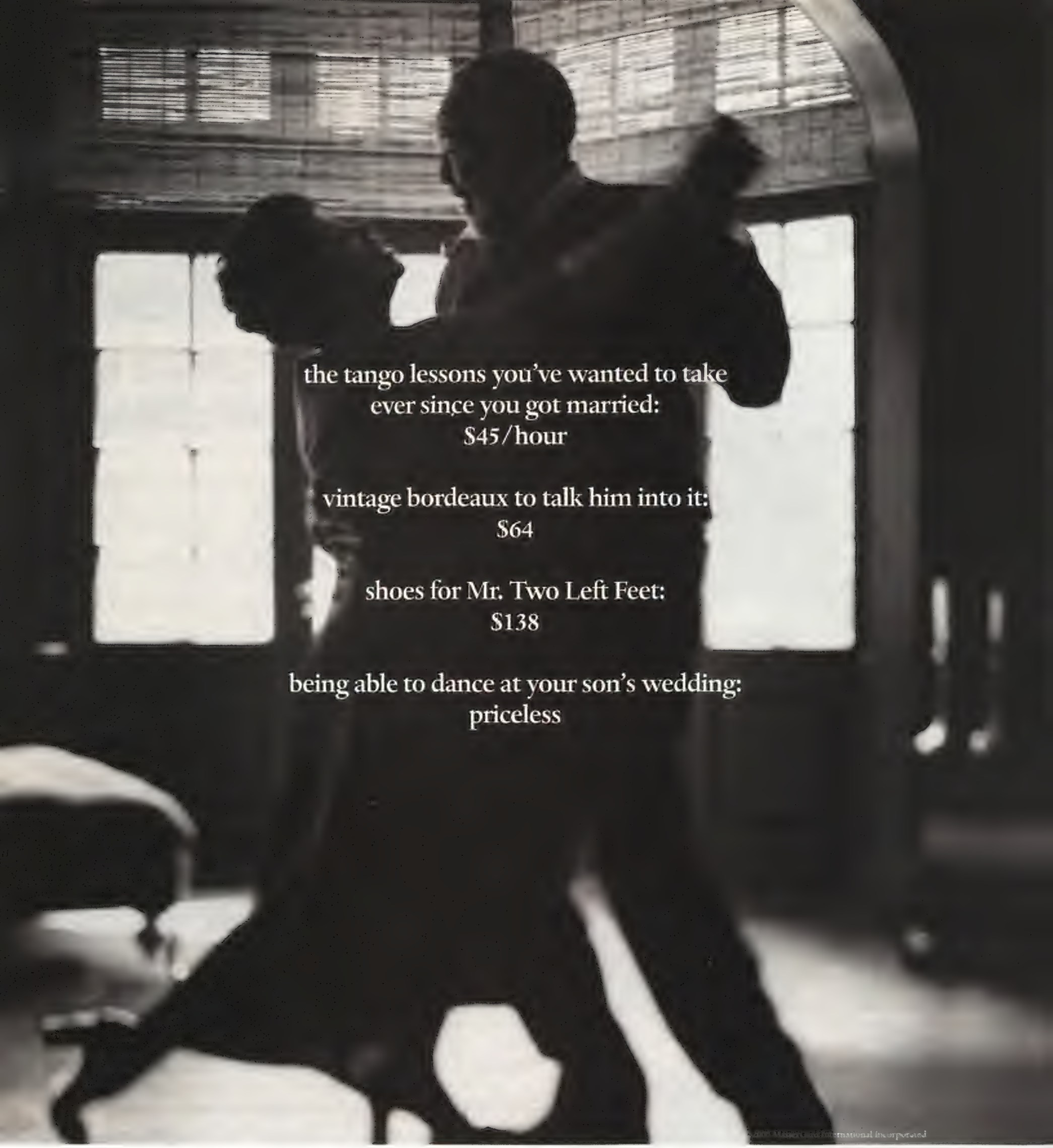
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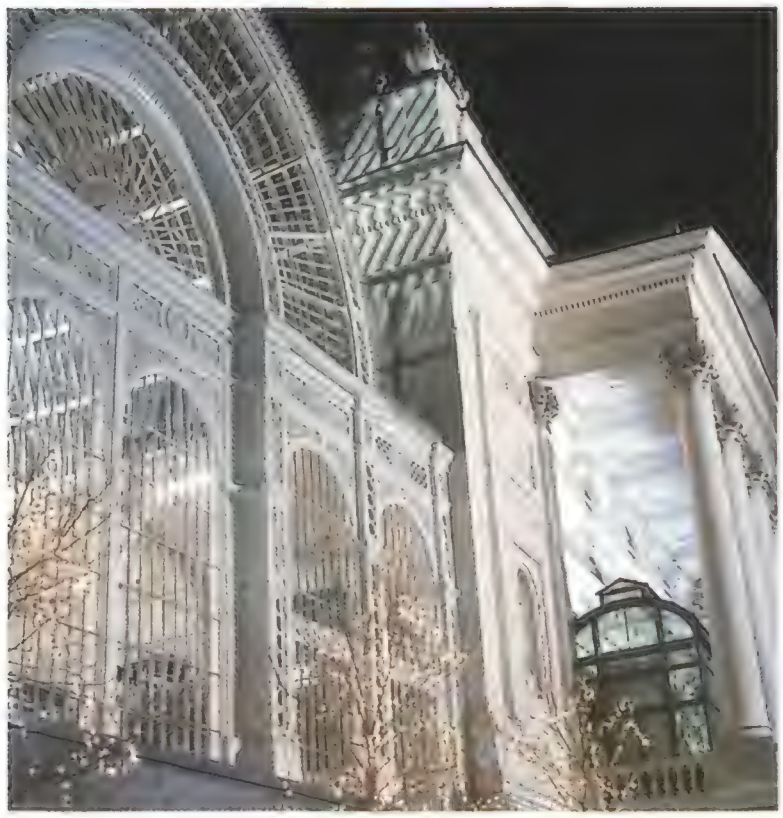
London, England

London's historic legacy needs little introduction. Landmarks like the Tower, Westminster Abbey, Houses of Parliament and Big Ben are etched into every traveler's mental album, whether he has visited Britain or not. But even the most ardent Anglophiles will be surprised by the wave of new developments that complement the city's traditional sights and confirm, once and for all, its reputation as the world's Cultural Capital.

In Greenwich, on a green sward that gave birth to Britain's scientific and maritime glory, stands the newly refurbished National Maritime Museum (www.nmm.ac.uk), now interspersing such historic icons as Nelson's bloody coat and the sea-stopped watch of a hapless *Titanic* passenger with the latest in exhibition technology. A short bus ride from here will bring you to the Royal Artillery Museum (www.firepower.org.uk) in Woolwich where, starting in May 2001, you can wonder at 600 years' worth of war, the old-fashioned way.

In May this year, on the southern end of the symbolic Millennium Bridge, the Tate Modern (www.tate.org.uk) ended the anticipation and welcomed its first visitors into the cavernous interior, hung with Picassos, Dalís, Pollocks, Warhols and other works from the 20th-century modern masters. Even its sister institution, the Tate Gallery (as venerable as it gets), has enjoyed a makeover, opening last March as "Tate Britain" (www.tate.org.uk) and showing off five centuries of old favorites (Hogarth to Moore) in improved and extended galleries. And let's not forget that other grande dame of the cultural world, the British Museum (www.thebritishmuseum.ac.uk), which, since September, has a Great Court—the largest covered space in Europe, complete with an education center, galleries and restaurants.



Top right and middle: *The new Tate Modern, housed in the former Bankside Power Station, has joined the ranks of the world's greatest modern art museums.* **Bottom:** *The highly acclaimed Royal Opera House, Covent Garden, reopened in December 1999, following a £214 million refurbishment.*

It's not just the museums that are making waves. In April 1999, the London Zoo in Regents Park opened its latest extravaganza, the Web of Life (www.weboflife.co.uk), which cleverly illustrates the whole

For information on all there is to see and do in London, go to www.londontown.com

MUSEUM MUSTS

Now it's even easier to squeeze the most out of London's incredible museums and galleries, thanks to *GoSee News*, a handy season-by-season guide to the latest and greatest exhibitions. It can be found on-line at www.london-gosee.com (along with information on the money-saving GoSee Card). Recommendations include:

The Holocaust Exhibition at the Imperial War Museum
Permanent Collection

Wellcome Wing at the Science Museum
Permanent Collection

The Wilde Years at the Barbican
October 5, 2000 to January 14, 2001

Shakespeare's Globe Exhibition and Tour
October 2000 through May 2001

Turner at the Royal Academy of Arts
December 2, 2000 to February 11, 2001

Curtain Time

For those who cannot resist British theater, opera and dance, here are some new and notable performances for the coming months. For updates, go to www.OfficialLondonTheatre.co.uk

Name	Theater	Opening Date
Witches of Eastwick	*Theatre Royal*	*Opened*
The Beautiful Game	*Cambridge*	*Opened*
Peer Gynt	*NT Olivier*	*October 24, 2000*
Giselle	*Sadler's Wells*	*October 30, 2000*
The Duchess of Malfi	*Barbican*	*October 31, 2000*
La Bohème	*Coliseum*	*November 2, 2000*
Ruby Wax Stressed	*Tricycle*	*November 14, 2000*
La Traviata	*Royal Opera House*	*November 24, 2000*
The Three Musketeers	*Young Vic*	*December 6, 2000*
The Nutcracker	*Royal Opera House*	*December 22, 2000*
Carmen	*Coliseum*	*February 20, 2001*
Playboy of the Western World	*NT Cottesloe*	*February 22, 2001*

insects-to-elephants meaning of biodiversity. Beginning a month later, the BFI IMAX Cinema (www.bfi.org.uk) is also taking education to a new level of fun by using the UK's largest screen to take viewers on 3-D large-format adventures. And one adventure that nobody should miss is a ride in one of the pods of the British Airways London Eye (www.ba-londoneye.com). Since February, the world's highest observation wheel and London's fourth tallest structure has been giving a 400-foot perspective on how much (and how little) London has changed.

Cardiff, Wales

The Welsh capital is only two hours from London (hourly train service from Paddington) or three hours by car, driving across the new Severn Bridge and stopping perhaps for a walk in the stark beauty of Brecon Beacons National Park. Yet the air is somehow different in Wales, and tradition seems to linger longer here than elsewhere. It emanates from Cardiff Castle, which climbs in turreted splendor from the leaves of Bute Park, and fills the elegant Victorian and Edwardian canopied arcades in the city center. It can be seen in the revamped Museum of Welsh Life in St. Fagans and the National Museum (www.nmgw.ac.uk), with its famous collection of Impressionist canvases (the largest outside Paris). It can be heard in the honeyed tones of the Welsh National Opera company, famous even here in "the city of song."

Left: *Cardiff is known as the Festival City. One of the highlights on Wales' busy calendar of events is its massive free Summer Festival (mid-July to the first weekend in August).* **Right:** *A stroll through the halls of the National Museum and Gallery is crucial to understanding the real Wales. Remarkable exhibits examine subjects from local flora to fine art.* **Bottom:** *Two lifelike sculptures stare out across the calm waters of Cardiff Bay.*

So the present developments seem all the more remarkable. Cardiff is, of course, the home of the new National Assembly for Wales. The streets have a new bustle, particularly in the Café Quarter, where outdoor umbrellaed tables stay busy into the calmer hours of night. The new Millennium Stadium, an indoor and outdoor sports arena, is a triumph of modern engineering with one of the world's largest retractable roofs. And Cardiff Bay (www.cardiff.gov.uk), the previously forgotten waterfront area a few minutes by bus from the city center, is steadily being revitalized with the interactive science museum Techniquest, the Norwegian Church Arts Centre and, most

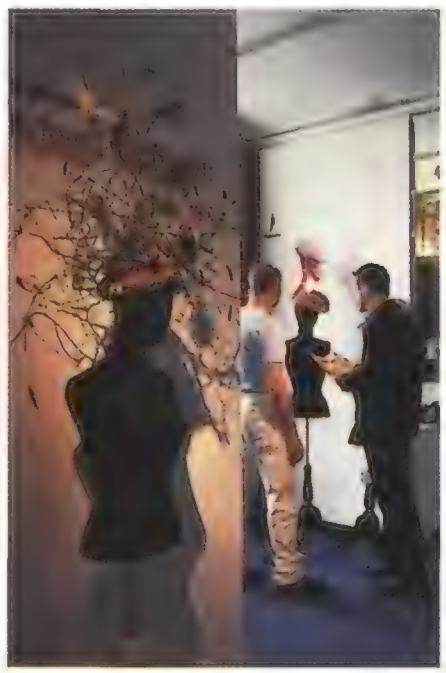
For information on Wales, go to www.travelbritain.org/wales

important of all, the Millennium Centre. A haven for Welsh culture, identity and talent, the Centre will open at the end of 2002.

Manchester, England

In the glory days of the Empire, Manchester rose to prominence as the world's cotton capital, one of the great industrial centers and a bustling port. This legacy greets the visitor in the shape of a soaring neo-Gothic Town Hall, an outstanding Egyptology collection in the Manchester Museum, an intriguing Museum of Science and Technology, and the City Art Gallery, a neoclassic wonder known for its collection of Pre-Raphaelites.

In recent years a bold urban development program has enhanced this traditional foundation. Today, angular modern architecture blends seamlessly with sturdy, brick-built Victorian structures. You can feel a new buzz in the air, reflected in the busy cultural calendar, in the restaurants and canal-side cafés, as Manchester prepares to host the Commonwealth Games in 2002. You can enjoy great theater on ten major stages (like the cutting-edge Library Theatres and the Corn Exchange, beautifully restored to its Victorian splendor) and listen to Opera North, with its performances by world-class companies.



The highlight of this development program is the Lowry (www.thelowry.org.uk), an architectural wonder that bursts out of the dun-colored Salford Quays, a surge of glistening steel and glass reflected in the still harbor waters. Opened last April, it brings the visual and performing arts together with art galleries, two theaters that will stage everything from ballet to comedy and music, and an interactive "experience" known as Artworks, plus shops, bars and restaurants. The galleries are devoted to the works of Manchester artist L.S. Lowry, whose urban landscapes are busy with figures and filled with subtle stories.

The next headliner to open its doors is the Millennium Quarter, a development that will breathe new life back into one of the city's most historic areas, filled with listed buildings like the Corn Exchange, the Cathedral and Chetham's School. Opening in November 2001, the focal point is Urbis, an exploration of Manchester's earliest beginnings as the first city of the Industrial Age.

Top: *The latest headliner in the city's rebirth is the Lowry, a thoroughly modern cultural center built around the populated canvases of local artist L.S. Lowry.* **Middle right:** *The Museum of Hatting in Stockport.* **Bottom:** *Give your taste buds a treat with a meal at Mash & Air, housed in a four-story mill, now one of Manchester's new breed of great restaurants.*

For more information on England, go to www.travelbritain.org/41

Glasgow, Scotland

After years of languishing in the shadow of Edinburgh, its near neighbor and Scotland's capital, Glasgow has suddenly and dramatically burst into the spotlight, receiving rave reviews for its style, culture and cuisine. Of course, its older attractions have always been worthy of greater recognition, like the medieval town surrounding the Glasgow Cross, the School of Art designed by native son Charles Rennie Mackintosh, the Victorian People's Palace, the Willow Tea Rooms and the extraordinary Burrell Collection, among many, many others.

But it's only since 1990, when Glasgow was celebrated as "the Cultural Capital of Europe," that the city acquired its "so hot it's cool" reputation. In 1999 it was named "UK City of Architecture & Design." Recently Glasgow completed its menu of museums with two remarkable additions—the Gallery of Modern Art and the Lighthouse, Scotland's Centre for Architecture, Design and the City. The Buchanan Galleries, Princes Square and the Italian Centre have raised shopping to the level of an art form. And an impressive lineup of events—including Celtic Connections and the Glasgow Jazz Festival—demonstrates the city's youthful enthusiasm for fun.

Top: *One of Glasgow's finest architectural prizes is the City Chambers, with dramatic Victorian design, lofty entrance hall and solid-yet-graceful staircases, crafted from alabaster and marble.* **Left:** *Lunch on the terrace at the Hotel Capthorne overlooking St. George's Square.*

Reviving an engineering marvel from the past, the Millennium Link (www.millenniumlink.org.uk) will reopen the 69 miles of canal that link Glasgow with Edinburgh. Starting early next year, you will be able to make the journey by boat, thanks to a remarkable rotating boat lift. The Glasgow Science Center (www.gsc.org.uk), due to open in spring 2001, will look far into the future, demonstrating the relevance and effect of science and technology on our lives. Among its cutting-edge features: the 300-foot Glasgow Tower, topped with an observation deck, and a titanium-walled exhibition hall.

For information on Scotland, go to www.2000toscotland.com

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The Return of the Phage

AS DEADLY BACTERIA INCREASINGLY RESIST ANTIBIOTICS, RESEARCHERS TRY TO IMPROVE A WORLD WAR I ERA WEAPON

BY JULIE WAKEFIELD

AMID THE DIN FROM STREET musicians, panhandlers and baby-toting moms along Baltimore's Inner Harbor, a petite woman wearing surgical gloves squats down on an embankment wall. She dips a sterile white bucket into the water, pulls it up, then peels off her gloves, and in seconds vanishes.

Few onlookers would guess Ekaterine Chighladze is a mercenary in a microscopic war. She marches the unsavory water past Camden Yards, the Baltimore Orioles' playground, and ducks into a lab of the University of Maryland.

She repeats this process every two weeks. So even before her analysis, she knows the bucket is chock-full of naturally occurring predatory viruses called bacteriophages—phages for short. After more than a half century of neglect in the West, these tiny viruses are gaining new consideration as slayers of so-called superbugs—those often deadly bacteria ever more resistant to conventional drug treatment.

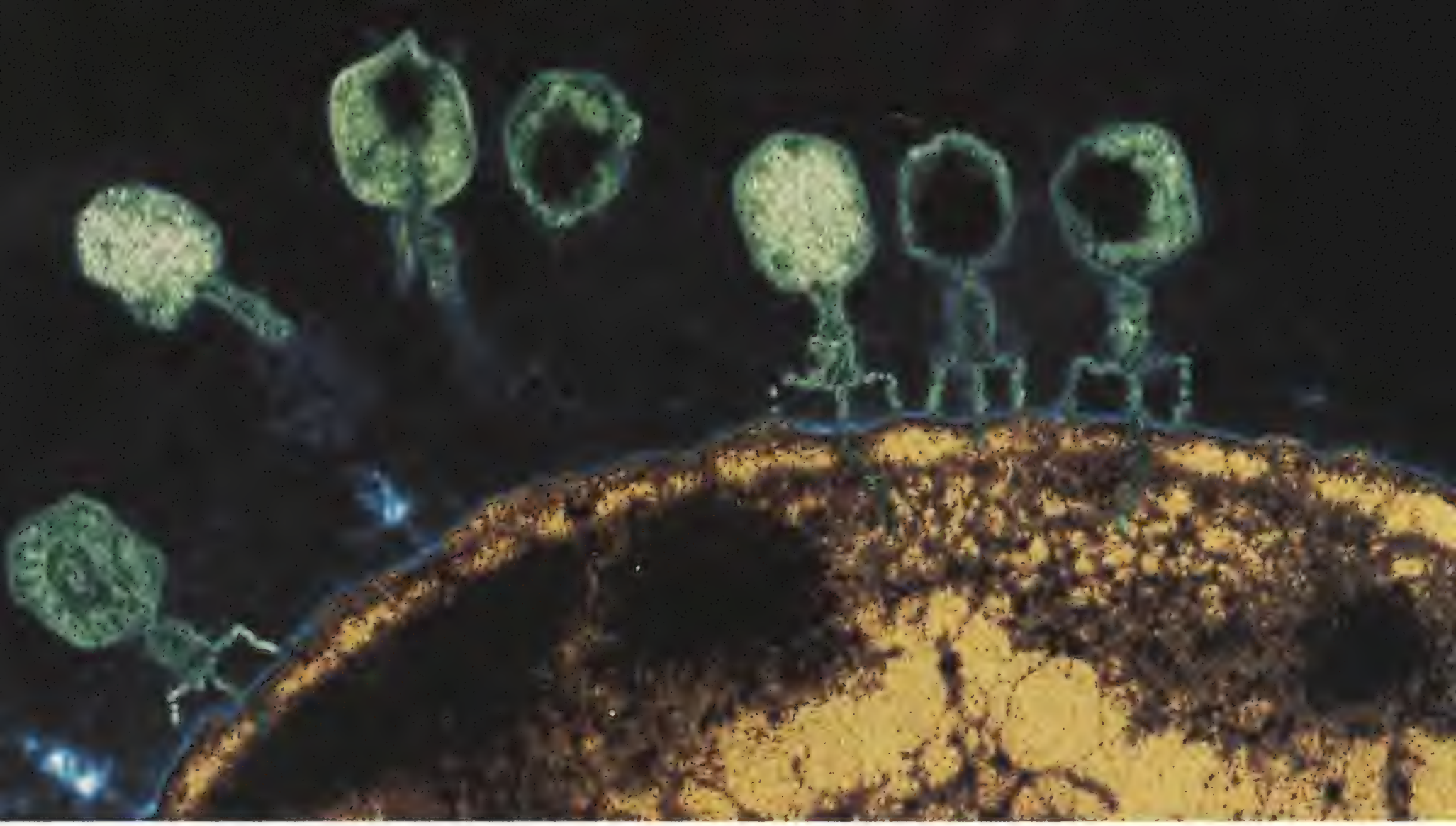
"Modern medicine could be set back to its pre-antibiotic days," Alexander Sulakvelidze, who runs the lab, says from behind a lab bench piled high with agar dishes of bacteria. In 1998 the professor of medicine cofounded a Baltimore company called Intralytix to manufacture phages. "All the advances that we take such pride in, from transplants to chemotherapy," he says, "may become impossible when bacteria develop resistance to antibiotics."

This phage, a kind of virus, is 270,000 times life-size. The stick-figure "legs" attach to a bacterium; the "head," the bulge at top, contains the DNA.

According to a recent World Health Organization (WHO) report, nearly all gonorrhea strains are unchecked by penicillin in Southeast Asia. In India, typhoid species have developed resistance to three drugs commonly used against them. Drug-resistant tuberculosis has invaded one in ten TB patients in Estonia, Latvia, and parts of Russia and China. In Thailand, the top three antimalarial drugs have been rendered useless.

"The phenomenon isn't just happening in developing nations," says Richard Honour, president and CEO of Phage Therapeutics International, a fledgling company in Bothell, Washington. "More American lives are lost each

PP. 43, 44 OLIVER MECKES/MPI-TÜBINGEN/PHOTO RESEARCHERS



Phages attach themselves to a bacterium at a magnification of 126,000. The phage at far right is injecting its DNA. The one to its left has done that and is now empty. The one next to that has just begun off-loading.

year to antibiotic-resistant bacterial infections than were claimed by the entire Vietnam War," he says. The WHO reports that some 14,000 people die each year just from drug-resistant infections picked up in U.S. hospitals. Worldwide, up to 60 percent of hospital-acquired infections turn out to be drug-resistant.

A single phage can produce tens of thousands of offspring an hour, growing exponentially.

Phages are among the simplest organisms on the planet. About a millionth of an inch in size, a fraction of most bacteria, phages become visible only under an electron microscope. A milliliter of water can contain up to a trillion. They thrive anywhere bacteria can exist—in raw sewage, open water, humans and practically everywhere else, says Carl Merril, chief of the biochemical genetics lab at the National Institute of Mental Health (NIMH). Some phages reproduce by invading a bacterium and forcing it to manufacture copies of the phage until the host is overwhelmed, he explains. Eventually, the progeny either dissolve or burst the cell wall, destroying the host bacterium, and move on, ready to prey on surrounding bacteria. A single phage can produce tens of thousands of offspring in an hour, growing exponentially from there. Other phages reproduce by becoming a part of the bacterium's genome. When the bacterium reproduces, so does the phage.

Human phage therapy is hardly new. Before the discovery of penicillin, pioneering doctors around the world employed phages as healers, giving them by potion or injection. These stalkers of bacteria were discovered during World War I by British bacteriologist Frederick Twort and independently two years later by the French-Canadian Felix D'Herelle, a self-taught medical maverick then at the Pasteur Institute in Paris. Both observed mysterious activity that produced clear areas in agar plates otherwise cloudy with thriving bacteria. Something was killing the bacteria. D'Herelle identified the microscopic marvel as a new type of parasite. "In a flash I had understood what caused my clear spots was in fact an invisible microbe . . . a virus parasitic on bacteria," he wrote. He named it bacteriophage, derived from two Greek words and meaning "bacteria devouring."

Early on, phages held much promise in conquering many of the world's scourges. D'Herelle went on to set up an institute with microbiologist George Eliava in Tbilisi, the capital of Georgia. There, they harvested phages from the nearby Kura River for culturing. Though D'Herelle left during the Stalinist era and Eliava was executed, the Eliava Institute of Bacteriophage, Microbiology, and Virology flourished. In the late 1930s, it churned out phages by the ton. Patients threw back their heads and swallowed a solution of the phages. Several major U.S. pharmaceutical companies—Eli Lilly, for one—entered the field.

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The first human clinical trials in the United States are slated to begin within a year.

But the advent of sulfa drugs and antibiotics in the 1940s relegated phages to the backseat—at least in Western countries. While phages frequently and inexplicably failed, antibiotics, it seemed, were fail-safe. Physicians preferred the new class of drugs because they were relatively easy to use, killed a broad spectrum of bacterial infections and didn't pose the risk living organisms do.

Later on, because of their structural and genetic simplicity and ease of growth in the lab, Western researchers tapped bacteriophages as model systems to study the molecular basis of genetics, spawning the science of molecular biology. The lab techniques that made the revolution possible were largely advanced through research on phages and their bacterial hosts. "If you look at the early Nobel Prizes in molecular biology, half of the awards went to researchers using phages," NIMH's Merril says. The work also helped researchers understand the shortcomings of phage therapy of the past. Some of the preparations were contaminated. On top of that, early researchers didn't realize that each phage type is highly specific for a given bacteria species, more finicky than Morris the cat.

In this artist's version, a phage is injecting DNA, the coiled material inside its head, into a bacterial host.

Back in the Baltimore lab, Chighladze painstakingly isolates phages from harbor water by culturing them with sundry strains of bacteria. Modern technology can decipher which type of phage kills which type of bacteria. For a broad spectrum assault, purified phages can then be combined in cocktails.

Over time, bacteria naturally develop resistance to phages, as they do to antibiotic drugs. Drug resistance, however, has been accelerated by global misuse of antibiotics. Phages, in contrast, can adapt to keep up with the bacteria, matching their prey mutation for mutation. "It's a biological arms race," explains Sulakvelidze, a former Georgian lab director who worked extensively with the Eliava Institute. Back in Tbilisi, phages never fell out of fashion. They've been in use in humans for 70 years with claims of miraculous results. Phages offer other advantages over antibiotics. For starters, they don't harm benevolent bacteria living in symbiosis with human hosts. But even with such positive traits, phages do have their downside. Rather than kill bacteria, some phages make them even more lethal. This happens, for example, with the bacterium that causes cholera.

In the mid-1980s interest in the West was renewed when British and Polish researchers studied phage success against microbes in animals. But burgeoning cases of antibiotic-resistant bacterial infections really prompted the surge in Western research.

Today Intralytix and Phage Therapeutics, like a handful of other companies, are developing phage catalogs to sequence the genetic code of a select hundred or so of the inestimably large number of species of bacteria-killing viruses found in nature. Although Intralytix has opted to use only naturally occurring species for now, other companies are attempting to genetically engineer phages so that they overcome bacterial resistance.

The first human clinical trials in the United States are slated to begin within a year. Possible applications include impregnating artificial skin or other materials with phages to heal infected wounds, intravenously medicating patients suffering from bacterial infections of the bloodstream, and culturing custom phage therapies from infected patients.

Psychological barriers to phage acceptance remain. "Some people worry about getting treated with a virus," Merril says, "but they don't realize that many of today's leading vaccines are made with live virus." Yet even Merril doubts phages will ever be a panacea or more than an adjunct to antibiotics.

Whatever the future, phages have already earned a respected place in the annals of medicine. We shall see how much larger their entry becomes.

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Building a Better Dinosaur

SMITHSONIAN HIGHLIGHTS

TO GIVE OLD BONES A REST, THE NATIONAL Museum of Natural History has taken down its century-old triceratops skeleton for a makeover. Even though the triceratops fossils had survived for millions of years in the ground, humidity and vibrations—caused by millions of visitors—were beginning to take their toll, and the dinosaur was in danger of crumbling. Once disassembled for conservation work, the fossilized remains were scanned to produce a digital 3-D image, like the one of its head, above. From this, technicians have created a more realistic, though plaster cast, skeleton. NMNH scientists have corrected mistakes made in the original mounting by turn-of-the-century scientists who knew less about the creature than we know today. Confronting the museum's T-rex skeleton, the new triceratops will lean forward in a defensive posture like a linebacker in a football game. Digital mapping of the skeleton provided additional dividends: accurate, small-scale plaster replicas. Scientists can easily manipulate the joints on the replicas to better study how the triceratops moved—useful information for the computer experts that animated it for viewing on the World Wide Web. Scientists also found the head was too small for the rest of the body. They created a bigger one, 15 percent larger than the original, for use on the new skeleton. Work on the triceratops continues, with its debut in the Dinosaur Hall planned for later this winter.

—Jennifer Curry

NATIONAL MUSEUM OF NATURAL HISTORY, SI

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SMITHSONIAN HIGHLIGHTS

A Place to Sit

COOPER-HEWITT, NATIONAL DESIGN MUSEUM

Chairs. What are the design requirements necessary to satisfy the basic need for a place to sit? An exhibition at the Smithsonian's Cooper-Hewitt, National Design Museum in New York City addresses the myriad solutions that 20th-century designers have come up with so that we might all take a seat. "Masterpieces from the Vitra Design Museum: Furnishing the Modern Era" opens October 10 and showcases important modern furniture designs—mostly chairs—from the Vitra Design Museum in Weil am Rhein, Germany. Below, an aluminum armchair, made by Dutch architect and designer Gerrit Rietveld in 1942, is designed to minimize material and labor. Rietveld's innovative design was an early attempt to shape a strong chair from a single sheet of material. Architect Frank Gehry's "Wiggle Side Chair" (right) is made of corrugated cardboard. Gehry called his cardboard furniture, introduced in 1972, "Easy Edges"; its inexpensive construction made the furniture affordable. Gehry later abandoned furniture design, choosing instead to pursue architecture. His "Easy Edges" furnishings are still in production. The exhibition will be on view at the Cooper-Hewitt through February 4, 2001.

Gerrit Rietveld's aluminum armchair is made from a single sheet of metal.

Gehry's cardboard "Wiggle Side Chair" is on view this month at the Cooper-Hewitt.

American Presidents

SMITHSONIAN ASSOCIATES

October through December, the Smithsonian Associates is offering courses, lectures and performances in conjunction with "The American Presidency," an exhibition opening in November at the National Museum of American History. Topics include attorneys general of the United States; Presidential chiefs of staff; David Gergen on the essence of leadership from Nixon to Clinton. A six-part performance series, White House Piano Concerts, is featured also. For ticket information, or to order a catalog, call 202-357-3030.

SMITHSONIAN Website

WWW.SMITHSONIANMAG.SI.EDU

At the magazine's homepage, click on "Events" to go to the calendar and view on-line versions of Smithsonian exhibitions and activities. Click on the video clip to see how Smithsonian computer experts have animated the NMNH triceratops (p. 48). Additional works by SMITHSONIAN's acclaimed photographers are in the on-line Image Gallery. And visit "Kids' Castle," featuring games and activities for children.

Exhibitions and Events

NATIONAL MUSEUM OF AFRICAN ART

Identity of the Sacred: Two Nigerian Shrine Figures (through April 2, 2001) Two different Nigerian societies are examined through these tutelary deities.
Audible Artworks: Selected African Musical Instruments (through April 8, 2001) Audio stations provide samplings.
A Concrete Vision: Oshogbo Art in the 1960s (through October 22) Works by 11 artists from this Nigerian town.

ARTS AND INDUSTRIES BUILDING

Santos: Substance & Soul (through March 31, 2001) Features about 40 Latin American devotional santos. Organized by the Smithsonian Center for Materials Research and Education, the exhibition explores techniques conservators use to better understand museum objects.

DISCOVERY THEATER

Performances for youngsters, sponsored by the Smithsonian Associates. Call 202-357-1500 (voice or TTY) weekdays, 8 A.M.-4 P.M.

NATIONAL MUSEUM OF AMERICAN HISTORY

Freeze Frame (October 7 through March 2001) This exhibition explores early developments in documenting time through the photographic analysis of movement. It also features human and animal locomotion studies that Eadweard Muybridge performed between 1884 and 1887 at the University of Pennsylvania.
Rube Goldberg: Comic Art and Invention (indefinitely) An exhibition of pen-and-ink drawings and a model for an

THOMAS DIX/VITRA DESIGN MUSEUM (2)

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Pictured above (from left to right): Banneker-Douglass Museum, Annapolis; Hooper Strait Lighthouse, St. Michaels; Fort McHenry, Baltimore City.

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NATIONAL MUSEUM OF NATURAL HISTORY

Dresden Green Diamond (October 13 through January 10, 2001) An unprecedented exhibition featuring this 41-carat diamond is on view in the Harry Winston Gallery next to the Smithsonian's 45.52-carat Hope diamond.
Buccellati: Art in Gold, Silver and Gems (October 21 through February 25, 2001) More than 75 works from the private collection of the House of Buccellati, the renowned Italian jewelry and design firm. The centerpiece of the show is a stunning commemorative cup (right) created by Gianmaria Buccellati for the museum's permanent collection.

NATIONAL AIR AND SPACE MUSEUM

Special Hours: The museum opens at 9:30 A.M. daily, through December 31. Permanent exhibitions include:
Earth Today Data from Earth-orbiting satellites in real time, using advanced computer technology to provide an up-to-date picture of conditions on Earth.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

Wolfgang Laib: A Retrospective (October 26 through January 22, 2001) Surveys the work of this German artist who has expressed the minimalist aesthetic by creating objects from pure organic materials, such as beeswax.

A commemorative cup was created for the Smithsonian by the House of Buccellati.

RENWICK GALLERY, SMITHSONIAN AMERICAN ART MUSEUM

Amish Quilts from the Collection of Faith and Stephen Brown (October 6 through January 21, 2001)
Spirits of the Cloth: Contemporary Quilts by African American Artists (October 6 through January 21, 2001) These 50 quilts by 30 leading African-American quilters include depictions of traditional African dance, creation stories and designs used to help children learn mathematics.

Planning a Smithsonian Visit?

To receive a free Associates planning packet, write to Smithsonian Information, Smithsonian Institution, Washington, D.C. 20560-0010, or send your request via e-mail to info@info.si.edu, or call 202-357-2700 (voice) or 202-357-1729 (TTY), 9 A.M.-5 P.M., Monday-Friday; 10 A.M.-4 P.M., Saturday-Sunday, or visit www.si.edu. Note: Museums are generally open 10 A.M.-5:30 P.M. daily, except December 25. Parking is limited; Metrorail is convenient to most museums.

THE CASTLE—INFORMATION CENTER

Upon arrival make your first stop the Castle's Smithsonian Information Center. At the Associates Reception Desk, open 9 A.M.-4 P.M. daily, learn what's new at the Smithsonian and about other area attractions. Receive special Associates materials, hear about your discount privileges and register for a Sunday morning "Behind-the-Scenes" member's tour of the Castle.

RENATO ZUCCOLIN/NATIONAL MUSEUM OF NATURAL HISTORY, SI

NATIONAL POSTAL MUSEUM

Recounting Roosevelt Presentation Albums, 1903-1905 (through February 23, 2001) Albums of stamp die proofs that were given as favors by President Theodore Roosevelt.

ARTHUR M. SACKLER GALLERY

Asian Traditions in Clay: The Hauge Gifts (October 29 through April 22, 2001) Painted and burnished earthenware vessels from Islamic Iran and Iraq, and stoneware works from the Khmer empire.
Fountains of Light: The Nuhad Es-Said Collection (continues indefinitely) Objects from one of the finest collections of Islamic metalwork.

FREER GALLERY OF ART

Brushing the Past: Later Chinese Calligraphy from the Gift of Robert Hatfield Ellsworth (through January 2, 2001)

GEORGE GUSTAV HEYE CENTER, NATIONAL MUSEUM OF THE AMERICAN INDIAN [NEW YORK CITY]

who stole the tee pee? (October 1 through January 21, 2001) Historical objects and contemporary artworks by Native artists explore the social, political, cultural and personal changes that Native Americans experienced during the past century.
All Roads are Good: Native Voices on Life and Culture More than 300 objects are on view that were chosen by 23 Native Americans for reasons of spiritual and personal significance.

COOPER-HEWITT, NATIONAL DESIGN MUSEUM [NEW YORK CITY]

The Opulent Eye of Alexander Girard (through March 18, 2001) First major retrospective of this mid-20th-century designer and architect who helped define the "look" of the 1960s.

CLOSED FOR RENOVATIONS

The Smithsonian American Art Museum and the National Portrait Gallery are closed for the next three years. The Anacostia Museum Gallery is scheduled to open next summer.

SMITHSONIAN TREASURES TO GO

During the renovation of the Smithsonian American Art Museum's gallery space, some 500 artworks will tour throughout the country. Museums hosting exhibitions this month include the El Paso Museum of Art (Texas) and the Tampa Museum of Art (Florida). For more information, call 202-357-2247 or click on "Treasures to Go" at http://AmericanArt.si.edu.

The Cat that Walks by Itself

IN MEXICO'S MAYA JUNGLE, THE SURVIVAL OF THE JAGUAR HANGS ON RADIO COLLARS, HOUNDS AND FORMER HUNTERS

THE TRACKS ON THE OLD logging road were unmistakable. A jaguar had passed through last night. Marks of a huge feline paw led from the road into *la Selva Maya*, a vast expanse of tropical forest stretching through southeastern Mexico, northeastern Guatemala and Belize. The five dogs were already in a frenzy, sniffing the scent of *el tigre*, as the jaguar is called. All of us on the team looked at Pancho Zavala, the man who manages the hounds. Some of us called him Don Pancho, out of respect for his extraordinary knowledge of this jungle.

Don Pancho would decide.

He didn't say a word. He just nodded to Cuauthémoc Chávez, the field biologist in charge. That was it. We were going to chase the jaguar and capture it.

The jaguar had used a nearby tree trunk as a scratching post, and his enormous claws had left it in shreds. This was an impressive animal. Don Pancho warned us to prepare for a grueling chase. A male jaguar, he said, usually heads straight across country. The terrain was treacherous, with jagged limestone outcroppings underfoot, spiny vines and trees in dense undergrowth, and creatures like the fer-de-lance, the deadly poisonous pit viper.

No matter, we were eager to go. For nearly two weeks we had waited for this moment, getting up every day at 3:30 A.M. to patrol the nearly impassable road, looking for signs of the jaguar. I had joined this research team in early March, the beginning of the year's capture season. Home base was an abandoned hunting camp in Calakmul Biosphere Reserve. The camp, called Costa Maya, was once a small family farm but is now part of the "core zone" within the reserve, where all human activities are prohibited except scientific studies.

Since 1997, Gerardo Ceballos, an ecologist and professor at Universidad Nacional Autónoma de México (UNAM), has codirected the ambitious Calakmul jaguar project. Ceballos is in partnership with Carlos Manterola, director general of Unidos para la Conservación, who focuses on project coordination, conservation

In the Calakmul Biosphere Reserve, this jaguar is one of the cats being tracked to study behavior and range. Mesoamerican cultures venerated the jaguar, as evidenced by the Aztec stone sculpture above.

BY CHARLES BERGMAN

A young female has been chased up a tree by hounds, where she can be safely tranquilized by dart and then weighed, measured and fitted with a radio collar.

efforts and fundraising, and Tony Rivera, head of EcoSafaris, who manages all the field operations.

According to Ceballos, the forest in and around Calakmul probably contains the largest and densest population of jaguars north of Panama. The remote and rarely visited reserve in Campeche in southeastern Mexico covers nearly 1,787,000 acres and protects part of the largest surviving rain forest in the Americas outside the Amazon. The Calakmul Biosphere Reserve is one of the last refuges for endangered wildlife in Mexico, and one of the main reasons it was established in 1989 was to protect the jaguar habitat.

The jaguar *(Panthera onca)* is considered among the great cats of the world, the third biggest after the tiger and the lion, but it is the least studied of the large felids. Its spectacular spotted coat ranks it with nature's most beautiful animals and, thus, among the most vulnerable. The jaguar is vanishing from much of its range and is endangered through most of it. Not many people have been lucky enough to glimpse, much less study, wild jaguars, making the Calakmul project all the more important. George Schaller and Peter Crawshaw initiated the first study of wild jaguars in Brazil in 1977, but there have been few others. Radio collars have become the key to learning about these elusive predators. In Calakmul, the goal is to fit the cats in the Costa Maya area with radio collars and then track them, gathering data on their range, habitat needs and behavior. Ceballos and the other researchers want to use the knowledge they gain to manage the jaguar population properly. The jaguar is the

P. 54 ART WOLFE; PP. 55-56 PATRICIO ROBLES GIL/AGRUPACIÓN SIERRA MADRE

I wanted desperately to see the jaguar before it disappeared and I'd miss this chance of a lifetime.

"umbrella species" of the reserve, and saving its habitat will help protect all the fauna and flora of the region.

The jaguar is the perfect conservation symbol. A mythic animal with great imaginative allure, it has been a major presence in Latin American life. The Aztecs and the Maya revered it. As if to wrap themselves in the jaguar's power and authority, royalty and warriors in these cultures wore jaguar skins and framed their human faces with the intimidating jaws of gaping jaguar mouths. In the temples of Teotihuacán not far from Mexico City, the jaguar has its own palace, with murals portraying the creature in feathered headdress.

Though the jaguar is an icon in Latin America's identity, little is known about the cat. After two weeks of trying to find this particular male jaguar in Calakmul, I think I understand why. Jaguars are clever and powerful and mysterious. They are solitary and secretive, elusive in ways that suggest great intelligence. They thrive in the dense rain forests and are primarily nocturnal. And here in la Selva Maya, jaguars are the top predator.

After a successful chase, a hound is muzzled to prevent it from barking while the treed jaguar calms down.

Until recently, knowledge of the jaguar's habits was based mainly on anecdotes from naturalists and hunters. Theodore Roosevelt, who tracked jaguars on an expedition to Brazil for the American Museum of Natural History in New York, called the jaguar "the king of South American game, ranking on an equality with the noblest beasts."

And now we were using hunting techniques to capture the jaguar in Calakmul to help save the species. When Don Pancho gave the nod, everyone quickly readied for the chase. Chávez gathered the equipment, including the radio collar and antenna. Miguel Amín, a biologist studying jaguar prey species, and Javier Ojeda, a veterinarian, hustled the rest of the gear into their backpacks. To me, the most remarkable members of the capture team were the two *perreros,* or houndsmen. Fit and young, Valentín Díaz and Lolo Riveros were local men whose job was to run through the jungle with the dogs. They were the team's contact with the chase, essentially racing a frightened and fleeing jaguar. The men were also charged with protecting the dogs from getting wounded in a fight with the jaguar.

Don Pancho let the dogs go. In full cry, they disappeared in a heartbeat. They locked immediately onto the cat. Díaz and Riveros streaked after them into the jungle.

The rest of us waited a moment and then, following Don Pancho, crashed single file into the forest. We did not run or actually pursue the jaguar. We followed the dogs. More precisely, we followed the baying of the dogs. Don Pancho hacked away vines and small trees with his machete, and we worked our way through the jungle, trying to keep the dogs within earshot.

Even that was difficult. They quickly outran us. We lost all contact with both runners and dogs. Don Pancho looked worried. Still, he kept us trudging forward. We never saw the jaguar or the dogs during the "chase," and now we couldn't hear them either. But Don Pancho led us where he imagined the jaguar might go, based on his experience with jaguars and the terrain.

For nearly an hour, we hiked along in silence, trying not to get discouraged. Then, faintly, we could hear a distant baying. A smile flickered across Don Pancho's face. Our pace quickened. The sound of the dogs grew louder, more distinct. After a time I realized that the baying had not moved. The dogs were in one spot. Their baying, too, had changed, sliding into a high-pitched and frantic whining.

"Is the jaguar in a tree?" I asked Don Pancho in Spanish.

"*Parece*," he answered simply. "Seems so." Remarkably, he had guessed right about where this jaguar would run.

It was another half hour before we reached the dogs. The sense of excitement as we approached the scene was unimaginable. I experienced a wave of eager anticipation, bordering on a kind of worried rush. I wanted desperately to see the jaguar before, somehow, it disappeared, and I'd miss this chance of a lifetime.

The dogs had surrounded a huge tree. On one of the massive sloping trunks, a male jaguar in full view looked down on us. The five dogs were in a furor of unrestrained canine energy, yowling and leaping and racing around the tree. Sombra, the leader, was so excited that she tried several times to run up the trunk to

FERNANDO HOLSCHNEIDER/AGRUPACIÓN SIERRA MADRE

get at the cat, only to fall off. The dogs' wild clamor expressed the exhilaration we all shared. Tired and soaked with sweat, we looked at the jaguar and then at each other, smiling, savoring the joy of the moment.

And the concern I felt about seeing this jaguar was not misplaced. What happened next is one of the most vivid images I have of the entire experience. In one 20-foot leap, the jaguar flew from the tree and landed in the midst of the frenzied dogs. One more leap and the jaguar was gone, vanishing into the green brush.

The dogs' wild clamor expressed the exhilaration we all shared as we looked at the jaguar.

Instantly, the dogs chased him into the jungle. And then, as if attached by some invisible force to the dogs, the runners raced to the same spot and quickly disappeared.

We were left with the eerie sensation that we had just witnessed the reason the jaguar is at once top predator and spectral creature of the jungle. To survive, the jaguar has mastered the skill of vanishing into the forest.

But, sadly, in modern times, the jaguar has become known for another kind of disappearing act. The range of jaguars once extended from the Southwestern United States—from Louisiana to California—through Mexico, Central America and the Amazon, to northern Argentina. That range is now broken up, and the jaguar is gone from El Salvador and Uruguay and faces extinction in several other Latin American countries.

In the Southwest, the jaguar has been virtually extirpated by predator control killing, but two recent sightings of transient males in 1996 raise hope for the future. Even more promising is the recent discovery of a resident population of jaguars about 130 miles south of the U.S. border in Sonora, Mexico.

In northern Mexico, however, the jaguar has disappeared from huge areas of its range. Hunting and habitat destruction have been the major cause of the species' decline. In fact, Don Pancho once hunted el tigre, and his boss, Tony Rivera, was considered one of the region's foremost jaguar hunters and guides. Trophy hunters from North America would pay him $10,000 to guide them to a jaguar. Now he describes himself as someone who wants only to help the species. Rivera is also a great storyteller with an infectious sense of humor. Describing his role in the project one evening in camp, he told me with a smile, "I've been converted from a hunter of jaguars to a shepherd of jaguars."

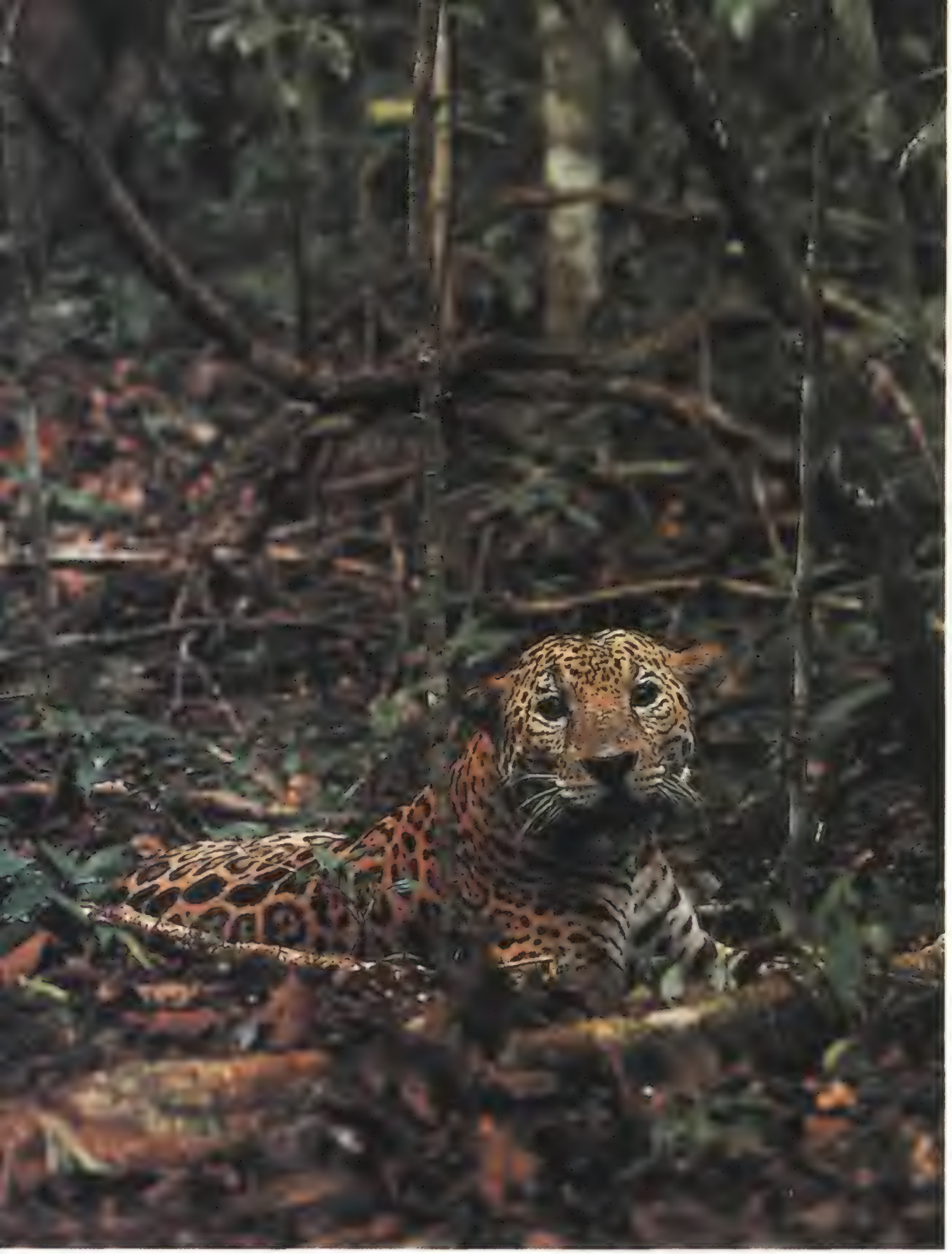
At the turn of the 19th century, about 4,000 jaguars a year were killed by hunters in Spanish-colonized Latin America; 2,000 jaguar pelts were shipped annually to Europe from Buenos Aires. In the 20 years following World War II, Peru exported almost 13,000 skins. As recently as the late 1960s, the number of jaguar pelts reaching U.S. commercial markets each year reached 15,000. Environmental scientist Norman Myers estimated that the international trade in spotted cat skins in the early '70s was worth $30 million.

It's become a fashion cliché to link cats with beautiful women. As Catwoman in *Batman Returns*, Michelle Pfeiffer became the fantasy image of wild, feline sensuality. Spotted cat pelts have seemed especially sexy, and in the late '60s became a symbol of high fashion, with a top-quality jaguar coat fetching $20,000.

ART WOLFE

It was largely hunting and exploitation in the commercial markets that led to the official protection for jaguars. In July 1975 the Convention on International Trade in Endangered Species (CITES) listed the jaguar as an Appendix I species, prohibiting commercial trade among signatory countries. In Mexico, the jaguar is officially endangered and hunting is illegal.

Unfortunately, when large sums of money are involved in poor countries, illegal hunting continues to be a problem. According to Rivera, it's no



A large male, sporting a new radio collar, slowly wakes up after being tranquilized deep in the forest of the Calakmul Biosphere Reserve.

longer a major issue in the Calakmul area, though locals may kill a jaguar if they encounter one in the jungle. There has been so little farming and ranching in the region because of poor soil conditions and water scarcity that the killing of livestock by jaguars has not been the problem it has been in other Latin American countries. But that may change, as recently people have been pouring into the areas around Calakmul. The usually poor and out-of-work newcomers are looking for ways to make a living. According to Ceballos, the government has encouraged thousands of people to move to the area, putting enormous pressure on the forests outside the protection of the reserve. There are now 52 communities around Calakmul with some 25,000 people. Ceballos expects the number to double in 25 years. They are cutting down the forest, trying to farm and ranch.

Deforestation and fragmentation of habitat have become serious problems throughout Latin America. According to Ceballos, nearly 990,000 new acres of forest are lost every year in Mexico, and 50 percent of the original tropical forest cover is already gone. One study estimates that in Mexico and Central America, jaguars now occupy only about 33 percent of their original range. "We may have won some environmental battles in Mexico," Ceballos said to me, "but right now, we're losing the war."

Even the Calakmul study is an example of the special efforts that must be made in many developing countries on behalf of the environment. The project is funded through a private organization, Unidos para la Conservación (United for Conservation). The jaguar study requires huge resources, and Unidos raises the money from private sources. The only funding from the government is Ceballos' university salary. The project is a model for wildlife projects in other parts of Latin America, where conservation and environmental issues in less affluent countries can fall low on a government's long list of priorities.

The major problem of all jaguar studies is the same; the cat is very difficult to capture and track. Most studies have been based on observations of very few animals over relatively short periods of time. "It's hard to build a meaningful database," Ceballos said. The goal of the Calakmul study is to capture jaguars and pumas and follow them for several years. Adding pumas to the study helps researchers better understand how the two species of big cats share the habitat.

This year began successfully with collars on eight jaguars—more than in any other study, Manterola told me. The project is also into its fifth season, already longer than any other radio-tracking project.

As we chased the jaguar through the jungle a second time, the race was not as long or as arduous. The jaguar climbed another big tree about a third of a mile away and hid behind a

dense cover of leaves. Through a small opening in the leaves, I could barely see his golden face and peering eyes.

Chávez readied the dosage of Ketamine, and Don Pancho fired a dart filled with the drug into the jaguar's rump. Once we were able to get the jaguar to the ground, the biologists quickly got to work. The cat measured just over six feet in length including his tail; his legs were nearly two feet from shoulders to paws, and the circumference of his head was about a foot and a half. He weighed 125 pounds.

But what these numbers cannot convey is the pure physicality of the jaguar. Apart from its stunningly beautiful markings, the overwhelming first impression of the wild jaguar at close range is its size. This jaguar was not lithe, long and graceful; he was heavy and muscular. While I was with the research team in Calakmul, we also captured three pumas and put radio collars on them. They were also impressive, but the jaguar was twice the weight of a puma in a body proportionately more compact and stocky.

With massive jaws, and fangs the size of my little finger, the jaguar was made for overpowering prey with one crushing bite to the throat or skull. I lifted one of his paws, and it was as big as my wide-open hand, revealing the same huge claws, I thought, that slashed up the tree by the road.

For all his physical presence, he lay before us as beautiful and peaceful as a dream. His coat had a satiny gloss to it, a tawny gold, paling to a creamy white on his belly, throat and chin. And his magnificent spots were like paw prints laid across his back, rough and irregular black circles called rosettes. They gradually coalesced toward face and legs and belly in solid black spots. His belly was exquisite, a Rorschach pattern of bold black splotches on his creamy white fur.

His belly was exquisite, a Rorschach pattern of bold black splotches on his creamy white fur.

Even as we worked, we fell under the spell of this sleeping cat. Drawn by the creature's irresistible beauty, each of us laid our hands on his fur and stroked it. The fur was short and coarse. The muscles, warm and strong, gave a molded feel to the body.

Though the jaguar species of Central America are typically smaller than those of South America, they are much larger than their local prey, mainly collared peccaries, armadillos, coati and deer.

Christian Dior designed this outfit in 1969 before the jaguar pelt trade was prohibited.

With the radio collar in place and screwed on, Chávez checked the signal. This jaguar became frequency number 411.2 on the dial. We gently lifted the jaguar to a safe place under the tree to wake up. Don Pancho and the two houndsmen hid out of sight with the dogs to wait. The rest of us stayed near the sleeping cat.

During this year's capture season, two new jaguars have been caught and another from a previous year with a malfunctioning radio collar was recaptured and fitted with a new one. There is now a total of ten jaguars that have been captured and collared at Calakmul. Of these, at least four—two males and two females—are known to be resident cats. Four are considered transients, since they disappeared after their capture. The two new ones are being closely watched to determine if they are residents.

The jaguars and pumas are tracked several times a week from a Jeep, from three high radio towers built on hills in the forest and from aerial surveys. Ceballos and Chávez are learning much about the jaguars—their home range and territory, breeding seasons, movement patterns and social interactions. The four resident jaguars have home ranges within a 23-square-mile area, and their territories overlap. Ceballos estimates that in Calakmul there is about one jaguar for every 6 to 11.5 square miles.

"That estimate coincides with other studies," Ceballos told me. Extrapolating these figures to the suitable habitat in Calakmul, Ceballos estimates the population in the reserve to be between 240 and 480 animals.

The researchers calculate the total population of jaguars throughout the entire Maya forest to range from 1,000 to 2,000 animals. But unless these cats are protected more effectively, they could be lost. Reserves will not guarantee their survival if the habitat outside their boundaries deteriorates.

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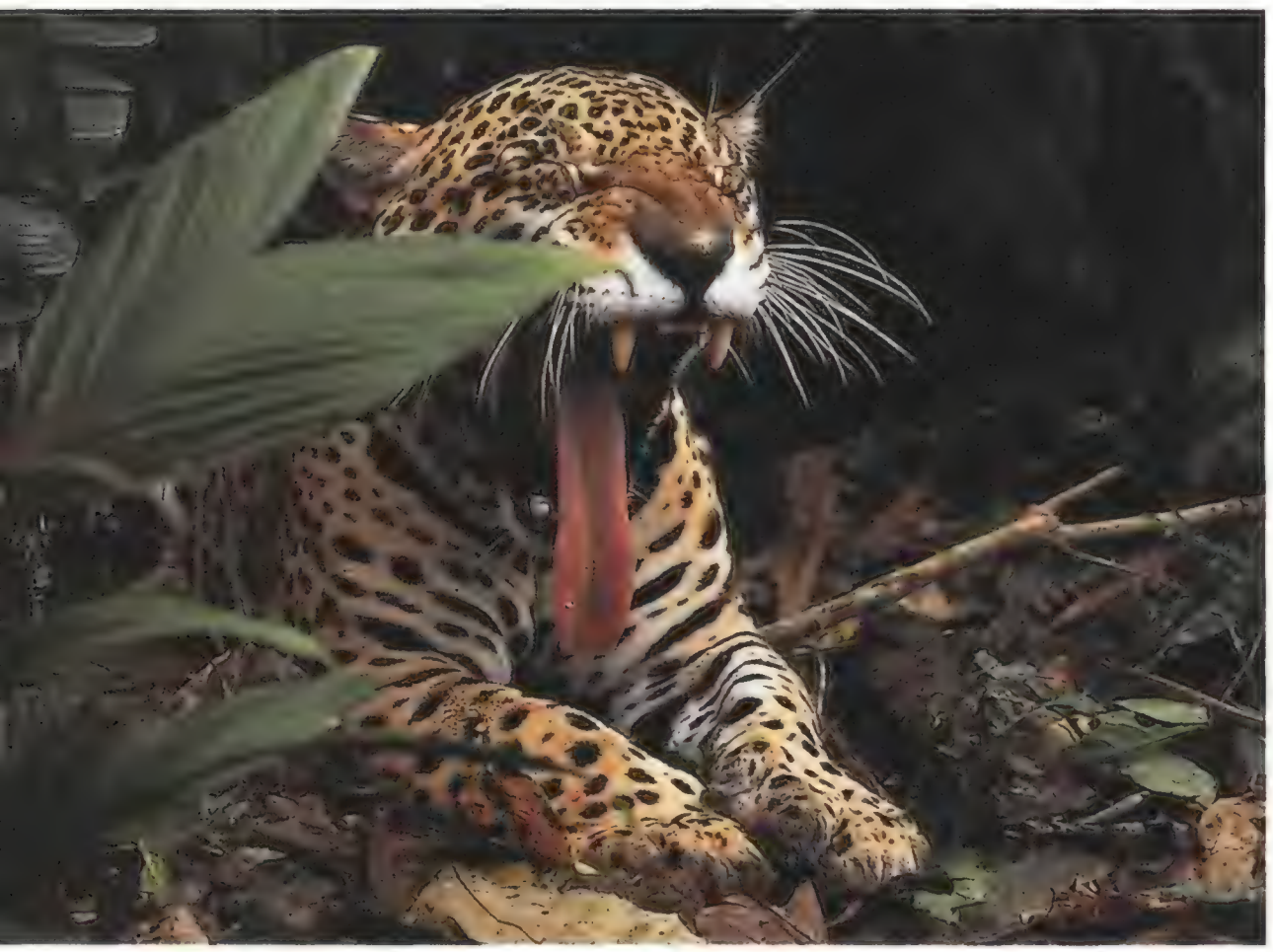
I sat in place, unafraid. The jaguar glared at me as I looked into his yellow eyes, a few yards away.

According to Ceballos, there is just one other nature reserve in the Maya region—in Guatemala—capable of supporting up to 400 jaguars, which makes the Calakmul reserve extremely valuable. The other seven reserves are smaller and only capable of supporting about 50 jaguars.

"We need a system of corridors connecting these reserves," Ceballos said, "to avoid the loss of small populations. We have a conservation opportunity now, before the jaguar is a conservation emergency."



A captive jaguar in Peru yawns, revealing traits that make it, in proportion to its size, the most powerful of the big cats: well-developed jaw muscles and sharp canines.

Though many worry that the jaguar's future prospects are not good, Carlos Manterola was optimistic about protecting the Calakmul jaguars. "If we manage them right," he said, "we can at least keep the most viable population of jaguars in Central America alive for the long-term."

Manterola and Ceballos agree that the major conservation challenge in the area involves working with the local people. With the population booming, the forests and jaguar habitats outside the reserve are being lost to farming and cattle ranching. "These people are new to the area," Manterola insisted. "They have no traditions with the land and don't know how to live with jaguars. We need to change people's hostile attitudes toward jaguars and find new solutions that give an equitable balance to both people and wildlife."

As we waited deep in the jungle of Calakmul for the jaguar to wake up from the tranquilizer, I could not help but reflect on the incredible richness of this reserve, home to some 550 species of vertebrates, 92 of them mammals. Ceballos told me there are about 40 species of bats. Of the approximately 300 species of birds, many are rare or endangered. During our morning walks we had caught a glimpse of such spectacular tropical rain forest species as ocellated turkey, two species of tinamou (strange chickenlike creatures of the jungle), great curassow, a king vulture, and a royal flycatcher with an orange crest like nothing I'd ever seen. One morning I saw a nesting pair of ornate hawk-eagles soaring above the canopy—stunning and crested and rare.

I crouched behind a small bush and watched the jaguar slowly regain consciousness. He lifted his head heavily, then rested it again on the dry leaves of the forest floor. His body was stretched out, his front legs extended. I was sorry for the stress we had caused this jaguar. Yet the information he would supply to Ceballos and the others compensated for his capture.

After about an hour and a half, Chávez and the others approached the jaguar cautiously to check on his recuperation. We had shared this jaguar's company for almost three hours. As they stepped near, he suddenly reared up, roared loudly and lunged at them. They jumped back. The jaguar chased them a few feet and stopped. I sat in place, for some reason unafraid. The jaguar glared at me. I looked into his yellow eyes, now only a few yards away. The entire world of Calakmul was contained in his eyes.

After several minutes, the jaguar slowly stood up, turned and ambled a bit unsteadily away from us. We watched him walk into the jungle, but this time he did not vanish. With the radio collar attached to his neck, he began his new career, helping to preserve the jaguars and all the other creatures of la Selva Maya.

Charles Bergman is an English professor at Pacific Lutheran University. He last wrote for SMITHSONIAN *on squirrel monkeys.*

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Kudzu
Love it—or Run

The lush, aggressive weed that "grows like the devil" and just will not die is manna for sheep, cows and folks who use it to cure hangovers, weave baskets and make jelly

BY DOUG STEWART ✝ PHOTOGRAPHS BY KATHRYN KOLB

DEEP IN A WEST GEORGIA FOREST, LLOYD Hood is battling kudzu. The fragrant, fast-growing weed infests an ever-expanding swath of the American South, including several thousand acres of the U.S. Army Corps of Engineers' West Point Project, where Hood does landscape maintenance. The area has suffered a severe drought for several years, but the kudzu here is lush and green all the same. Kudzu always seems to be lush and green.

"I don't think it hinders kudzu whether it's dry or wet," Hood mutters as we bushwhack through vine-draped red oaks, yellow poplars and loblolly pines. "It still grows like the devil." A number of the vines have gnarled, bark-covered trunks the thickness of a person's arm that climb high into the tree canopy above us. I'm impressed that kudzu does so well in such dim light. It takes me a while to realize that much of the canopy shading us *is* kudzu. With a long-handled bush ax, Hood whomps a thick brown vine snaking along the ground, a vine that bears signs of earlier cutting. "It doesn't look like it, but it's alive!" he says between whacks. "You think you've killed it, but it just keeps coming back. That's what makes it so dangerous."

The tender green shoots of kudzu can grow nearly a foot a day, covering everything in their path (opposite). Kudzu products include a fiber purse and condiments.

Over the past century, kudzu (rhymes with "mud zoo") has become a mythic feature of the Southern landscape. The vine and its overlapping, plate-size leaves shroud buildings, trees, billboards, broken-down trucks and anything else too slow to get out

In a vacant lot in Monroe, Georgia, kudzu-covered trees look like fanciful creatures.

of the way. *Pueraria montana* reaches top speed in late spring and early summer, when its supple green shoots can grow nearly a foot a day. Road crews are forever battling the weed as it climbs up utility poles, sometimes shorting out electric connections, and crawls over railroad tracks, where it turns into a slippery green mash under a train's wheels.

Yet people down South have a certain fondness for the weed. "It's who we are. It's our destiny," sings the cast in *Kudzu: A Southern Musical*, based on the comic strip by Pulitzer Prize winner Doug Marlette. Southerners write poetry about it, name their pets after it and film mock-horror movies about it (*Kurse of the Kudzu Kreature* and *Kudzula!* among them). They give it nicknames: the green scourge, the weed that ate the South, the cuss-you vine, Jack-and-the-beanstalk, and foot-a-night. And they tell jokes about it. The proper way to plant kudzu? Drop the seeds and run like hell.

"Kudzu fits into the South's gothic tradition," says University of Mississippi historian Charles Reagan Wilson, director of the Center for the Study of Southern Culture. "It dies off for much of the year, then blooms again and spreads, overgrowing everything. It fits the image of the South as a subtropical landscape, a lush and exotic Garden of Eden, which from the beginning was the way that Europeans saw the American South." But in that lushness lurks danger, he adds. "It's like the image of the Southern bayous: they may be romantic, but they're deadly if you get lost in them."

Up close, kudzu is a lovely plant. Native to East Asia, kudzu has been used for centuries there to make tea, health tonics and fibers for kimonos. Kudzu first arrived in this country as an ornamental vine shading the Japanese pavilion at the 1876 Centennial Exposition in Philadelphia. It slowly caught on as a porch vine in the South, offering welcome shade and a delightful aroma when it blossomed. The trouble is, kudzu tends to grow where it wants to grow. Aided by a warm, moist climate, a long growing season and human carelessness, the vine and its large, flat leaves today blanket some seven million acres of real estate, an area roughly the size of Massachusetts. Kudzu is most abundant in Alabama, Mississippi, Georgia and the Carolinas.

In my roamings around the South, I'm often transfixed by the spectacle of rampant kudzu. Roadside trees resemble a weird topiary with a nubbly green surface. The drooping, vaguely menacing shapes—kudzu kreatures!—look frozen in place as though green gunk had just fallen from the sky and draped everything, transforming the scene as completely and magically as an early-morning blizzard transforms a familiar city street. The vines fill vacant lots in downtown Atlanta and entangle mailboxes in rural South Carolina (although homeowners always carve an opening in the foliage so the mail can get through). Here and there, you see adjacent front lawns, one well tended, the other abandoned to waist-high kudzu. Oddly, the neglected lot, being uniformly green

and attractively lush, appears at a glance to be the cultivated one.

Once, kudzu was known throughout the South as the miracle vine. The Department of Agriculture paid farmers in the 1930s up to eight dollars an acre to plant kudzu on their land to control erosion. The Soil Conservation Service shipped some 100 million plants in the 1930s and '40s from nurseries in Georgia and Alabama. Leading the blitz was the Alabama Polytechnic Institute, now called Auburn University.

"For a while, kudzu was a salvation for folks who had eroded land and nothing to feed their livestock," explains Jim Miller, a U.S. Forest Service ecologist, when I visit his office at Auburn. Miller shows me old scrapbook photographs he salvaged that were taken before his day, when kudzu was being groomed as the savior of the South. One picture shows a barren, heavily eroded gully whose contours remind me of the Grand Canyon. Another frames two little girls posing like Munchkins in Oz amid a sea of undulating kudzu.

Miller is a slow-talking man who punctuates his speech with long sighs as though resigned to a grim future. He likens kudzu today to a foreign army of occupation, one whose relentless onslaught we're doing woefully little to stop. Over a period of years, he used to visit a spot in nearby Tallapoosa County ("I called it Kudzu Heaven") to take pictures of kudzu attacking a grand old oak like wolves on a wounded moose. "Kudzu vines don't just drape a tree," he says. "A vine will go up and then come back down, twining around itself, and go back up again." Besetting the old oak, the corkscrewing vines were like springs under tension.

One old picture shows little girls posing like Munchkins in Oz amid a sea of undulating kudzu.

"Finally, they pulled that tree all the way down."

Even if kudzu were made Public Enemy Number One, it wouldn't be easy to stop. An herbicide named Transline works fairly well, but a single gallon of concentrate runs $300, and it takes several treatments over years to eradicate an acre of the weed. You can kill it by mowing it regularly for four or five years—if your land's not too rough, the vines aren't too thick and you've got the energy. Digging up the roots is an excellent tactic. Unfortunately, a 20-year-old plant that's never been cut back can have a single root weighing 250 pounds. To dig it out you need a backhoe. John Byrd, a professor of weed science at Mississippi State University, has just begun a five-year test of various herbicides for kudzu. Already, however, he's found a surefire way to kill the weed. "I had two test plots over in Oxford," he tells me in a deep, leisurely drawl, "and they're going to put a big Super Wal-Mart on one of them." Oh, yeah, that'll take care of the problem for sure.

In truth, the most promising way to fight any invasive alien pest, whether kudzu or water hyacinth or melaleuca, is to bring over the natural enemies that keep it from running amok in its land of origin. The right insects and fungi can control even the

Grazing sheep are a natural solution to kudzu control in a Tallahassee park.

"The main way kudzu gets spread isn't by birds or wind but by human activity, like road-building."

most monstrous of monster weeds. At North Carolina State University, entomologist David Orr is trying to find a biocontrol for kudzu.

"Kudzu is totally out of control in this country, so it's doing an unnatural thing: it's overwhelming trees," he says as we drive down a narrow dirt road through a 20-acre kudzu patch right on the Raleigh campus. A few years ago, Hurricane Fran damaged or killed many of the trees that edged this kudzu patch; now the weed is finishing the job. "It's become a black hole for biodiversity," he says as we pass through the silent expanse of uniform green. Orr is a lanky, affable 41-year-old who grows Venus's-flytraps in a bog near his house as a hobby. With collaborators in China, kudzu's ancestral home, he's looking at a large beetle that zeros in on the roots. (It hasn't made it to the United States and won't until the beetle demonstrates that related items like soybeans won't become part of its meal plan.) Kudzu's most important natural enemy in China may well be human beings, Orr says. "Everywhere we went there, we saw people cutting kudzu vines, which they use as rope." In the fall, people comb the hillsides to dig up the roots. Mixed with water, the root starch is an age-old popular hangover remedy.

Oddly enough, kudzu already has well-established natural enemies here in the United States. As we get out and wade into the kudzu patch, Orr yanks on a vine and shows me a pod of large, flattish seeds hidden under the foliage. Several have been punctured, probably by thirsty stinkbugs. "Over 90 percent of kudzu seeds in this country are killed by insects, mostly natives," he says. Kudzu, in fact, rarely sprouts from seed; it usually grows from roots. "The main way kudzu gets spread around isn't by birds or by wind but by human activity, like construction and road-building." Both are growth industries in many areas of the South. "All you need is one root in a truckload of fill, and you have a new kudzu infestation." Given kudzu's reputation, Orr is amazed by people who want to spread it to new places. "One fellow contacted us looking for 1,000 pounds of kudzu seeds because he wanted to take them over to Africa and grow kudzu for the elephants there."

In fact, a certain breed of Southerner—a distinct minority, to be sure—has long believed we should be exploiting kudzu's good points. A weed is just a plant growing in the wrong place, after all. The first evangelists of kudzu harvesting were Charles and Lillie Pleas, who in the early 1900s mailed out kudzu seedlings and root crowns from a small nursery in Chipley, Florida, to buyers looking for a fast-growing forage crop for their livestock. In 1943 a flamboyant newspaper columnist and radio personality named Channing Cope founded the short-lived Kudzu Club of America, which sponsored kudzu festivals and planting contests. "Cotton isn't king here anymore!" he

South Carolina artist Nancy Basket hangs kudzu paper to dry in her barn.

proclaimed. "Kudzu is king!" After Cope died in 1962, kudzu enveloped his farm in Covington, Georgia, front porch and all.

Parks superintendent Larry Schenk of Tallahassee is no fan of kudzu, but he, too, thinks the plant may as well be used to advantage. Several hundred acres of public parklands in the Florida capital are now covered in kudzu, he says. "It's devastating. It's overtopping 100-year-old live oaks and killing them." Spraying does not work: Transline is banned throughout Florida as a groundwater pollutant. The solution? A shepherd and 300 special kudzu-eating sheep. The five-year, state-supported kudzu control project, begun last spring, is the brainchild of a New Hampshire company called Bellwether Solutions, which uses sheep up North to control weeds in hard-to-reach places under power lines. If it works, Schenk thinks a Southern sheep-farming revival may be in the offing. "The sheep are loving the kudzu," he says. "This could be a way for small farmers to fatten up their animals with free food and at the same time eradicate a pest plant."

For the hard-core kudzu enthusiast, however, the plant deserves better than being eaten by animals. That's certainly the viewpoint of Edith Edwards of Rutherfordton, North Carolina. "Eating kudzu is what's keeping me young," the 73-year-old self-styled Kudzu Queen tells me when I met her recently. The occasion is the annual "Krazy With Kudzu!" weekend, held on a cliffside terrace in Chimney Rock Park in the craggy kudzu-covered hills of western North Carolina. Her philosophy is: it's here, so why not use it? As bemused tourists mill about, Edwards, a lively woman wearing a giant hat woven from green kudzu vines, offers for sale woven-kudzu baskets and kudzu Christmas trees (a best-seller), packaged kudzu root starch, kudzu-blossom jelly and syrup, and other hard-to-find items. She herself takes a spoonful of kudzu powder daily in a glass of cool liquid and uses crumbled kudzu leaves as a broccoli substitute in casseroles. "And if you cut yourself, you take a little bit of this root starch and wrap it on the cut with a little water, and you don't get a scar."

North Carolinian Edith Edwards serves fried kudzu leaves and claims eating the weed keeps her young.

Operating a deep-fat fryer on a nearby table, Gordon and Deany Martin are serving french-fried kudzu to all comers. The smallish batter-dipped leaves are sprinkled with grated Parmesan and a dash of garlic salt. They taste yummy—like garlic and Parmesan, actually. Kudzu's reputation being what it is, the Martins have to work to get many of the onlookers to put the cooked weed in their mouths. "It's better than potato because you don't have to peel it," Deany explains to a couple in their 30s.

"Phil, you've got to taste that."

Phil happily obliges. "That's good!" he says after chewing a moment. "Honey, we been wasting it on the goat all this time." From her reaction, his wife appears unconvinced.

Edith Edwards' husband Henry, meanwhile, a farmer with a deep-furrowed, sun-burned face, gives a small knot of listeners some advice on kudzu baling. "The secret is cutting it low and baling it high," he says in a patient singsong. "Otherwise, the vines tangle up your baler." Edwards tells me his dairy cows have set county records for milk production thanks to kudzu silage. The cows love it—"You can't keep a fence between kudzu and cattle"—and so does he. "When you drive through our countryside, which is so dry right now, the fields all burned up, and you come to a beautiful lush kudzu field, you just want to roll in it. Oh, yeah."

One of Edwards' kudzu-bale customers is Nancy Basket, a part-Cherokee artist and basketmaker who lives in nearby Walhalla, South Carolina. She used the dried bales as walls for the restored barn where she has a studio. "It makes great insulation," she says as she shows me around after the festival. On her front porch are cut kudzu vines that she'll split to make baskets. Behind the barn, a bale has been steeping in a barrel of water for almost a year. She'll use it to make dyed paper for her cut-paper artwork: brightly colored still lifes, street scenes, paper quilts.

Basket is a good-natured, rather eccentric woman with braided black

hair and a storyteller's lighthearted ebullience. As a Native American, she feels a reverence toward all living things, she says, but she's not averse to whacking a little kudzu to protect the already vine-tangled mimosas behind her barn. At the moment, the kudzu is in full bloom. Two-toned purple blossoms hide primly under the curling leaves, filling the air with a grape-scented perfume. The vines on her property, I notice, are scaling not only the barn and the woods out back but also the walls of her house. The bedroom window is open a crack. Looking up, I see a thin green tendril curling right inside, flowers and all. "Every few days, it grows right in," Basket says to me in a stage whisper as though beginning a ghost story. "My mom used to snip it off and would never tell me. I would just find the little cut pieces."

Henry and Edith Edwards' grandsons, Stuart, left, and Will Beam, feed their horses a meal of baled kudzu hay at the family farm.

Kudzu is a restless plant. Whether we welcome its probing shoots or not, it keeps advancing, aggressive and wily, into new and often improbable territory, looking for footholds, turning a bit of sunlight and a little moisture into subterranean reservoirs of root starch, which fuel the next advance. Yankees like me may feel aloof and a little smug about our Southern brethren's kudzu problem, but perhaps we shouldn't any longer. Kudzu has moved north.

In a large cluttered room filled with scuffed metal cabinets, Les Mehrhoff, curator of the University of Connecticut's herbarium in Storrs, slides open a shallow specimen tray. Lying on stiff paper inside are the pressed leaf and stem of a kudzu plant found growing in New Haven 22 years ago. "I saw it myself in 1978," Mehrhoff tells me. "It was climbing up a wall behind a natural-foods store." Maybe, he guesses, someone once tossed out an empty sack of organic peanuts from Georgia, and a few kudzu seeds inside managed to germinate in the trash pile.

There are other kudzu infestations in the Northeast. On Long Island, there's a dune in Shoreham that's covered with kudzu, as is the backyard fence of an abandoned house in Southold. Vines have been sighted climbing trees next to a Chinese restaurant in Kingston, Massachusetts. With the past three winters in the United States being the warmest ever recorded, kudzu may be finding the climate up North more to its liking. Or maybe, just maybe, kudzu itself is changing. Says Mehrhoff, "It's only a matter of time before a kudzu seed carrying cold-tolerant genes germinates, grows up and proliferates nonstop." Mutant kudzu! Dixie's revenge!

The Edge of the Woods natural-foods store in New Haven is now a small grocery store, the Edgewood Super Market, on a quiet corner just west of downtown. On the sunny September afternoon I visit, the small gravel lot behind the store looks like a slice of south Georgia. Kudzu, bushy and green, covers the chain-link fence and reaches three feet into the air above the barbed-wire top. In an alley beside the apartment building next door, sheltered from the wind and warmed by sunlit brick, the kudzu is even thicker. I don't notice any other weeds—no dandelions, no ragweed, no crabgrass. If it's green, it's kudzu.

As I snoop around, the apartment superintendent, Walter Horowiec, shows up. Keys hang in bunches from the belt of his blue workpants, and he wears the stub of a pencil behind one ear. No, he's never heard of kudzu, but he hates it. "This stuff is brutal," he says. "I mean, tug on this." Even a tender-looking new shoot is as tough as rope. Horowiec has tried a power mower and a string trimmer, but they get tangled up instantly. He went at the roots with an ax. It made no difference. He managed to clear the alley using hand tools, but the kudzu just got thicker than ever. "It always comes right back," he says grimly. "It just will not die."

Contributor Doug Stewart still prefers kudzu to poison ivy. Fire ants were the major obstacle for photographer Kathryn Kolb.

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THE ART *of* PERFORMANCE

THE EXUBERANT FIN DE SIÈCLE STYLE IS CELEBRATED IN A SWEEPING EXHIBITION AT THE NATIONAL GALLERY OF ART IN WASHINGTON

Art Nouveau's signature whiplash curves were employed with great flourish by Czech-born artist Alphonse Mucha in his enticing 1897 advertisement for Job cigarette paper (right). The 1896 Favrile Glass flask by Louis Comfort Tiffany (far left) clearly owes a debt to the 19th-century "swan-necked" Persian flasks pictured next to it.

Art Nouveau

JOB
Mucha

BY STANLEY MEISLER

As the 20th century neared, more than a hundred years ago, artists and intellectuals and merchants throughout Europe and in the United States tried to whip art into new shapes so it could keep pace with the ever-changing modern world. This frenzy to throw off the stultifying past and become modern, excited architects, painters, sculptors, illustrators, jewelers, potters, furniture makers, glassblowers, metalworkers, writers, dealers and shopkeepers. Since they believed they were creating everything anew, their style is best known today as Art Nouveau, French for "new art."

The new art, popular from the early 1890s to the eve of World War I, took many different paths and drew inspiration from many different sources—Japanese, Chinese and Islamic art, Celtic and Viking revivals, 18th-century rococo furniture, the British Arts and Crafts Movement and literary trends such as symbolism. At its most typical, the highly decorative and ornamental style was lavish with arabesques and whiplash curves, botanical and zoological forms, portraits of seductive women and a decadent symbolism. At their best, Art Nouveau artists worked in several disciplines—architects designing armoires as well as buildings, for example, and furniture makers designing jewelry as well as armoires. Harmony was their ideal, so that a room's paintings, wallpaper and furniture would all fit together. Some of the ornamentation was so excessive that it seems kitsch now, but much of Art Nouveau is still delicate, beautiful, dynamic and free.

Although British Arts and Crafts designer Walter Crane created works such as this swan wallpaper (1875) that anticipated Art Nouveau, he railed against the style's decadence and hedonism.

A number of cities emerged as busy workshops for the new creativity, including Paris, Nancy, Brussels, Barcelona, Glasgow, Vienna, Munich, Turin, New York and Chicago. Giants dominated the style: the Scottish architect Charles Rennie Mackintosh, the Austrian painter Gustav Klimt, the French architect Hector Guimard, the Czech illustrator Alphonse Mucha, the Belgian architect and interior designer Victor Horta, the Spanish architect Antoni Gaudí and the German-born dealer Siegfried Bing. The style had a host of different names a hundred years ago: Secession in Vienna, Jugendstil in Germany, Stile Liberty in Italy, Modernismo in Barcelona and, most famously, the one that stuck, Art Nouveau in France.

The style had enormous popularity at its height but always provoked detractors as well. Designer Walter Crane, a leader of the British Arts and Crafts Movement, called Art Nouveau "a strange decorative disease." British sculptor Alfred Gilbert sneered that it was "absolute nonsense" and belonged to "the young lady's seminary." A French critic derided it as "the art of vegetarians." And for much of the 20th century, champions of Pablo Picasso and Henri Matisse and modern art treated Art Nouveau with contempt.

In recent decades, however, there has been renewed, almost nostalgic, interest in the styles that came before the age of modern art, and Art Nouveau has benefited from the attention.

In April, London's Victoria and Albert Museum opened the largest exhibition of Art Nouveau ever assembled. The show, expanded even more, comes to the National Gallery of Art in Washington on October 8 and remains on view there through January 28, 2001. A reduced exhibition then goes on to the Tokyo Metropolitan Art Museum in April 2001 for its final stop. Not since the Paris Exposition Universelle of 1900 has Art Nouveau been on display before so many people.

The show in Washington, which is sponsored by DaimlerChrysler, will feature some spectacular masterpieces. A cast-iron entrance wrought by Guimard for the Métropol-

Italian designer Agostino Lauro's double parlor (1900-01) blends furniture, fabric and wood into a single, harmonious ensemble.

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Pioneering Art Nouveau architect Victor Horta graced bourgeois homes such as the Van Eetvelde House in Brussels with ironwork and multiple windows.

C. H. BASTIN & J. EVRARD, BRUSSELS

itain, the Paris subway, with lampposts like giant tendrils and grillwork twisting in audacious curves, will be on view. So will the ladies' lunchroom that Mackintosh designed for Glasgow's Ingram Street tearoom, complete with high, straight-back chairs, gleaming silver-and-white walls and a mural of the languid figures of women, created by Mackintosh's wife, Margaret Macdonald. Turin designer Agostino Lauro's double parlor for an Italian villa, with curved mirrors, hand-carved woodwork and the same green-gold floral-patterned silk moiré adorning both the furniture and the walls, has been installed as well. On a much smaller scale, French jeweler René Lalique's *Dragonfly Woman*, a corsage ornament in the form of a nude woman with the lower body and diaphanous wings of a dragonfly, all crafted in gold, enamel and precious stones, is also on display.

It is fitting that the Victoria and Albert mount an Art Nouveau show of such magnitude and quality. "In the 19th century, the Victoria and Albert, which was then known as the South Kensington Museum, was virtually the only real decorative art museum in the world," says the V&A's Paul Greenhalgh, curator of the exhibition and editor of the accompanying catalog. Many Art Nouveau artists, he says, came there to look at designs and gather ideas.

The museum, in fact, purchased a large selection of the Art Nouveau works displayed at the 1900 Paris Exposition. When the museum exhibited them soon afterward, however, there was an outcry by detractors, some of them prestigious leaders of the British art establishment. The museum gave in and shipped all the pieces to a satellite venue in east London. When that building was transformed into the Victoria and Albert's Bethnal Green Museum of Childhood, the works of Art Nouveau were arrayed alongside a trove of toys and dollhouses. It was not until the 1980s that the V&A recuperated the Paris Exposition purchases for its main building.

Art Nouveau owed much of its early popularity to marketing, and Siegfried Bing, a dealer in Paris, served as guru, merchant and public relations flack for the movement. Bing came from a German mercantile family that had imported French porcelain and glass for many years. After attending school in Hamburg, he joined the Paris branch of the family business and eventually embarked on his own in France.

Bing found it "an astonishing anachronism" that so much of contemporary decoration was copied from previous centuries. Insisting that decorative arts deserved a standing as high as fine arts, he persuaded young painters to try their hands at textile and furniture design. He preached that a room should have a harmonious style and not look like an agglomeration of bric-a-brac and disparate furniture.

At first, Bing acted primarily as a merchant for artists. But finding that his shop had become a hodge-podge of unrelated items, he solved the problem by organizing his own workshops, becoming a partner in artistic creation by, as he put it, "having the articles made under my personal direction, and securing the assistance of such artists as seemed best disposed to carry out my ideas."

In a celebrated commission, Bing purchased designs from colorist painters such as Pierre Bonnard and Henri de Toulouse-Lautrec for Louis Comfort Tiffany to transform into stained-glass windows at his New York studios. Bing displayed these windows when he opened a new gallery,

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Deemed the first fully mature Art Nouveau image, Aubrey Beardsley's 1893 illustration was inspired by Oscar Wilde's play *Salome*.

L'Art Nouveau, at 22 rue de Provence in Paris. He was so influential by then that the style swiftly assumed the mercantile name. Bing conceived of his enterprise as an international marketplace, but this concept upset some critics who accused him of hurting French culture and artisans by lavishing so much attention on foreigners like Tiffany and Belgian architect Henry van de Velde.

French novelist Edmond de Goncourt wrote in his journal, "Are we to be *denationalized*, conquered morally in a conquest worse than real war? . . . No! This cannot be the new furniture of France! No! No!" Designer Charles Genuys admonished that "we cannot violate our Latin and Gaulish nature by capitulating to the Saxons."

Bing was stung by the accusations. Although born in Hamburg, he was a recipient of the French Legion of Honor and regarded himself as a French patriot. But he retreated in the face of the criticism. When the Bing pavilion opened at the Paris Exposition of 1900, it exhibited art almost entirely by French artists or foreign-born colleagues who had adopted France as their home.

Bing was not the only merchant specializing in the sale of Art Nouveau. His British counterpart was Arthur Lasenby Liberty, whose shop on Regent Street in London sold fabrics, silver, pewter, jewelry and furniture. Liberty's exports to Italy were so well-publicized that Art Nouveau was known there as the *Stile Liberty*, or Liberty Style.

For France, the architect and designer Hector Guimard epitomized Art Nouveau more than any other artist. His 141 Métro entrances, after all, graced the landscape of Paris. Even today, 86 still stand, all now classified as French historic monuments (p. 84). His Castel Béranger, a large apartment building completed in 1898 when he was just 31, is an obligatory stop on the itinerary of any Art Nouveau aficionado who comes to Paris.

Guimard looked on nature as the model for his curves and twists and exuberant botanical forms. "Beauty appears to us in perpetual variety," he said. "Forms are engendered from movements which are never alike. . . . Let us bend before . . . the examples of the great architect of the universe." This idealization of nature led him into sinuous and sensuous forms, infused with femininity.

Guimard attracted a good deal of notice when the Castel Béranger won a prize from the city of Paris for the best facade created that year. A self-promoter, he rented an apartment in the building and organized guided tours of the premises. He even published 24 postcards advertising what he called the "Guimard Style." The artist Paul Signac was also a tenant. Soon after he moved in, he wrote a friend, "Come soon, our blue staircase will amuse you."

Most architects proposed little stone buildings resembling railroad stations as entrances to the new subway system that opened in time for the 1900 Exposition. But Guimard's design of cast-iron gates and grilles—in myriad modular combinations—struck the fancy of officials looking for a modern motif. The Spanish Surrealist Salvador Dalí, who extolled Guimard long after Art Nouveau fell out of favor, insisted that "those divine entrances" led one to "descend into the region of the subconscious. . . . "

Guimard, whose wife was American and Jewish, took refuge in New York before the outbreak of World War II and died there in relative obscurity in 1942. When an admirer tried in vain to prevent the destruction of a Guimard building in Sèvres in the late 1960s, the novelist André Malraux, President Charles de Gaulle's minister of culture, told him, "You like that stuff? . . . Everyone to his own nasty taste." Despite Malraux's derision, a swelling movement of

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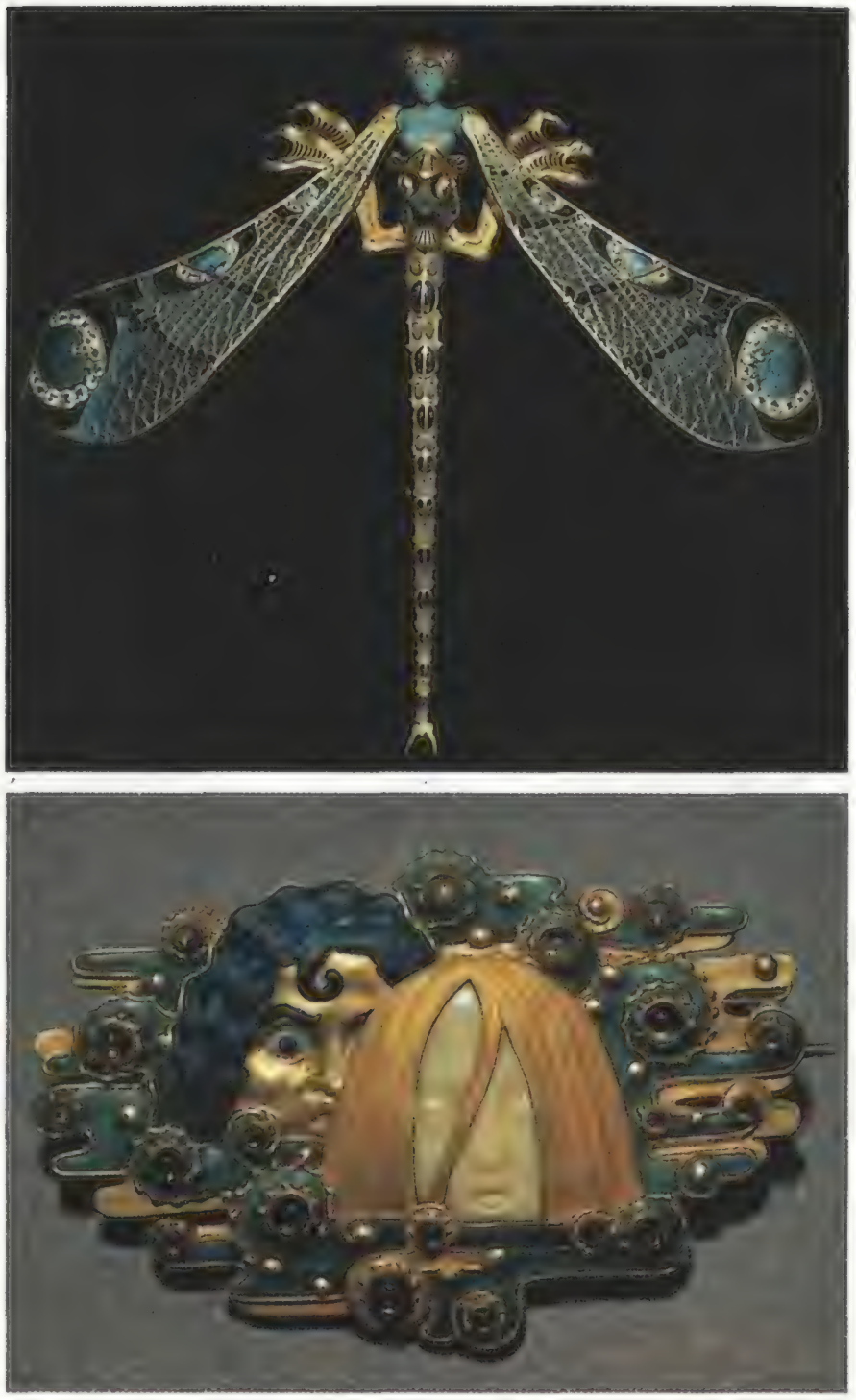
artists and intellectuals had already emerged determined to safeguard and restore the works and reputation of Guimard.

The career of Czech-born Alphonse Maria Mucha illustrates the range of the best Art Nouveau artists. Working for a Paris printer, he was the only illustrator available in the shop in 1894 when the great actress Sarah Bernhardt ordered a poster advertising her in the play *Gismonda*. That chance commission made him an instant celebrity. Bernhardt was so pleased with his design that she signed him to a six-year contract to produce more posters for her. He would also design theatrical sets for her plays and jewelry for her to wear onstage.

News of the Bernhardt commission prompted others to seek him out, and Mucha was soon swamped with orders to create posters, lithographs, murals, magazine covers, book illustrations, theater programs, restaurant menus, carpets, fabrics, furniture and jewelry. Although Mucha's drawings of "the Divine Sarah" portrayed her as dignified, almost regal, he created erotic, exotic, heavy-lidded women with luxurious hair for his other commissions. In one poster, Mucha, anticipating modern advertising, hawked Job cigarette paper through a seductive woman with cascading hair that tangled below her waist like vines in a forest.

In 1900-1901, Mucha designed a shop on the rue Royale for the jeweler Georges Fouquet. The store, which was closed in 1923 and later reassembled in the Carnavalet Museum in Paris, is practically a primer of Art Nouveau, a fantasy of all the symbols of the style. A bronze frieze of a slightly draped woman with heavy jewelry dominates a facade that also displays ten stained-glass portraits of women. The interior features sculptures of peacocks, fish and nude women, curved furniture, floral designs and wallpaper patterned with strange insects.



René Lalique's *Dragonfly Woman* (top) was exhibited at the 1900 Paris Exposition. The topaz-studded "Apparitions" brooch (above) was designed by Eugène Samuel Grasset for Maison Vever jewelers.

The heyday for Art Nouveau came with the Paris Exposition of 1900. The fair, which attracted 48 million visitors and included exhibitions from 40 nations, stretched alongside both banks of the Seine from the Eiffel Tower to the new Alexandre III bridge. Art Nouveau works could be found throughout the pavilions. The lavish main entrance—the Porte Binet—incorporated many Art Nouveau themes. And so did the wonderful Pavillon Bleu restaurant on the Seine. Bing's own pavilion—L'Art Nouveau Bing—featured six rooms designed and decorated by three different artists. Some 35 Art Nouveau pieces from the 1900 fair, including important works by the master Paris jeweler René Lalique and Nancy furniture maker Louis Majorelle, will be featured in the exhibition at the National Gallery of Art.

Loïe Fuller, an American dancer who starred at the Folies Bergère, also had her own pavilion, its Art Nouveau facade rippling with curves. Shimmering under the colored lights of electricity, a novel source of energy in those days, Fuller twirled her billowing, diaphanous robes to metamorphose herself into birds, butterflies, flowers and some less recognizable forms of Art Nouveau. A short video, played continuously at both the Victoria and Albert and the National Gallery of Art, shows her swooping like a bird and then accelerating into a tornado of curving motion. The celebrated dancer Isadora Duncan praised Fuller for dancing with all the "magic of Merlin." Artists were entranced by Fuller's movements and used her as a model for posters, sculpture and lamps.

Despite all the hoopla in Paris, Art Nouveau was hardly a French exclusive. Bing, in fact, credited Belgium, where architects Henry van de Velde and Victor Horta

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The dragonfly, a popular Art Nouveau motif, takes flight in Hector Guimard's entrance to the Porte Dauphine station of the Paris Métro.

worked, as "the cradle of this species of art." Van de Velde championed the idea of creating harmonious rooms, while Horta changed the face of the new bourgeois neighborhoods of Brussels. Although conservative King Leopold II refused to commission Horta for any public works, rich Belgians sought him as architect for their private homes.

The Art Nouveau phenomenon spread across Europe and spanned the Atlantic as artists and craftsmen exchanged ideas and techniques through travel, international expositions and a growing number of art magazines. Moreover, the urge to break with the past, to feel new, to feel modern, struck artists everywhere from Helsinki to Chicago.

The new look took on different shapes in different cities. In Barcelona, the buildings of Antoni Gaudí were so ornate and curvaceous that they seemed to pulse with life. In Glasgow, however, the Art Nouveau of Charles Rennie Mackintosh (SMITHSONIAN, January 1997) was far more subtle, his wonderful buildings and furniture made exciting by soft touches of curve, color and asymmetry.

Sometimes the style took different directions even in the same city. In Vienna, Gustav Klimt was surely the most decorative of Art Nouveau painters, his portraits of femmes fatales bathed in a mosaic of gold and brilliant color. Yet designer Josef Hoffmann, allied with Klimt, designed silver products so geometric and functional that their decoration seems secondary.

Although Chicago architects Louis Sullivan and Frank Lloyd Wright worked in the style, the most prominent Art Nouveau personage in the United States was Louis Comfort Tiffany, son of jeweler Charles Lewis Tiffany, who founded New York's renowned Tiffany & Co. Louis was a painter, decorator and designer who profited from his father's connections and from the appetite of the new, wealthy American industrial elite for the latest fashions in arts and crafts. As a young man, he and his associates received commissions to decorate the Connecticut home of Mark Twain and the Red and Blue rooms of the White House under President Chester A. Arthur. Louis Tiffany was best known, however, as the creator of exquisite glass. Like many of his European cohorts, he loved lavish color, admired Middle Eastern and other exotic ceramics, and pored over books about insects and flowers in his search for subjects for design. He developed new methods for mixing an amazing variety of colors and for rendering glass iridescent. "I have reached the point," he said, "where it is possible to produce any color and any luster that may be required."

Tiffany became as much an entrepreneur as an artist, employing scores in his workshops on Long Island. He was known as a high-handed boss who tolerated no lapses in the quality of the work from his crews of specialists and apprentices. The host of Tiffany pieces in the current exhibition includes what was regarded as his masterpiece at the 1900 Paris Exposition—a tri-panel glass screen decorated in an intense, color-rich tangle of vines, vegetables and fruit (pp. 86-87).

Art Nouveau emerged at a time when writers, following new neurological theory, believed that the tensions of modern urban life weakened the body but sharpened the senses. This belief spawned a movement of writers with a penchant for describing intense sensitivity. Members of the movement became known as the decadents. A French novel, *A Rebours* (*Against Nature*) by Joris-Karl Huysmans, the story of an aesthete searching for exotic pleasures, was hailed as "the breviary" of the decadent movement. The English writer Oscar Wilde, closely allied to Art Nouveau, used the Huysmans novel as a device in the plot of his own decadent novel, *The Picture of Dorian Gray*. The heightened sensitivity of the decadents led their literary movement close to Art Nouveau and its sensual imagery.

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An eloquent expression of the Art Nouveau style, this c. 1900 leaded-glass folding screen, with its asymmetrical organic motifs, was created by renowned artist Louis Comfort Tiffany.

One aspect of that closeness was the obsession of many writers and artists with female sexuality. An extraordinary number of erotic inkwells, candlesticks, lamps and figurines—most small and inexpensive—entered middle-class homes as Art Nouveau. The zeal of the artists sometimes went too far. In 1896 the furniture maker Rūpert Carabin produced a wooden chair that features the sculpture of a trussed-up nude woman clinging to its back.

This obsession led to anxiety about femmes fatales—evil, usually exotic women who manipulated their charms to destroy men. Salome—the princess famed for her seductive dancing and for ordering the decapitation of John the Baptist—was one of the most popular. British artist Aubrey Beardsley, who was reputed to own a collection of the "finest and most explicitly erotic Japanese prints in London," created a series of illustrations based on Oscar Wilde's French dramatization of the story. One panel, a supreme achievement of Art Nouveau design, with tensile lines and mannered arabesques, shows a determined Salome with serpentine hair clutching the head of John the Baptist while mocking him with the boast that she has just kissed him on the mouth.

After the first decade of the 20th century, Art Nouveau began to experience a loss of favor. By 1914 it was moribund, barely selling at all. "The speed with which it died is amazing," says exhibition curator Greenhalgh. A growing uneasiness over the association with decadence and erotica was a factor in the decline. But, perhaps more important, the style was also hurt by the intensification of nationalist feelings that tended to deride Art Nouveau as too international, by a growing distaste for conspicuous consumption, by a nascent preference for geometric abstraction over nature in design, and by a reaction against Art Nouveau's love of decoration.

Adolf Loos, an influential Vienna architect, won numerous converts to his plea for purity. "The man of our time who daubs the walls with erotic symbols to satisfy an inner urge is a criminal or a degenerate," he wrote in 1908. "The evolution of culture is synonymous with the removal of ornament from objects of daily use."

All in all, Art Nouveau was simply not modern enough. As a teenager, Picasso spent a good deal of his time at Els Quatre Gats, the tavern that served as a center of Art Nouveau in Barcelona. He listened to the advice of the city's leading Catalan painters and tried to follow their style. But in 1900, at the age of 19, he turned his back on Els Quatre Gats and left for Paris to create what he would regard as true modern art.

For Picasso and other pioneers of 20th-century art, Art Nouveau had not broken far enough from the styles of the 19th century. The views of such modernists prevailed during the next few decades. But that ideological battle need not concern us anymore. No matter where it stands in art history, Art Nouveau a hundred years later strikes us as pleasing, often refreshing, sometimes worthy of awe and always kind of fun.

Frequent contributor Stanley Meisler has written for these pages on the cities of Glasgow and Vienna and on Scottish architect Charles Rennie Mackintosh.

BY DONALD MCCAIG

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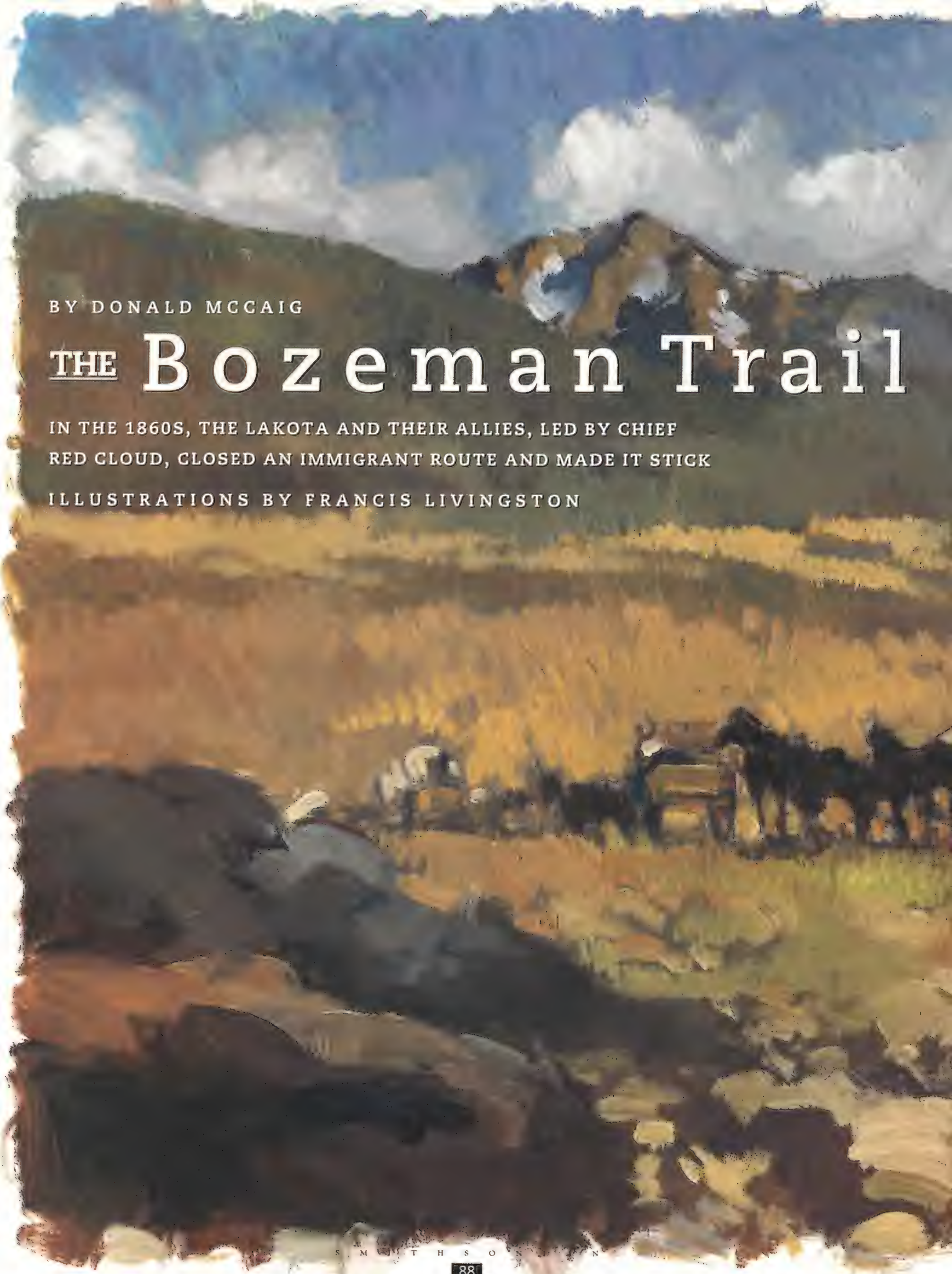


"AT FIFTY YARDS, I WOULD RATHER BE SHOT AT WITH A REVOLVER IN the hands of an average marksman. An Indian seldom misses anything the size of a man at that distance, and he will send the arrow clear through the body. These fellows are the finest riders I ever saw; they ride into battle without saddle or bridle,—only a lariat round the nose of the pony. How they keep on them I don't see; but they do keep on and put them through all sorts of maneuvers with the greatest facility, It is rather a pretty sight to see a lot of warriors coming to the attack with their gay trappings and feathers. They are 'light horsemen' and attack in open order, never coming straight in a charge, but circle round and round in a gallop till they are near enough to fire. They shoot their arrows without paying the least attention to the horse, and will keep four of them in the air all the time at a distance of fifty or sixty yards."

Lieut. Col. L. P. Bradley, Commanding Officer, Fort C. F. Smith

December 25, 1866: the Christmas ball at Fort Laramie was especially merry. Tables of viands lined the hallways of Old Bedlam (the bachelor officers' quarters), musicians from the post band produced sprightly dance tunes, and junior officers' wives flirted (decorously) with their husbands' superiors. Col. I. N. Palmer, Fort Laramie's commanding officer, was genial. A blinding blizzard had shut down travel, and the fort, which anchored the Army's three outposts along the Bozeman Trail, was snug in contrast to the bitter weather out-of-doors. As everyone knew, even Red Cloud's Lakota holed up in the wintertime. Then conversation died when—wrapped in a buffalo coat, wreathed in ice—Portugee Phillips burst in. The miner had ridden four days and 235 miles to deliver the worst possible news. Far from being holed up, Red Cloud's Lakota and their allies had wiped out Capt. (Brevet Lieut. Col.) William Judd Fetterman and his entire detachment after they had marched bravely out four days earlier from Fort Phil Kearny to protect some woodcutters.

In his dispatch to Army headquarters, Fort Phil Kearny's commander, Col. Henry Carrington, begged, "Do send me reinforcements forthwith. . . . I have had but today a fight unexampled in Indian warfare; my loss is 94 killed. . . . I have recovered 49 bodies, and 35 more are to be brought in, in the morning, that have been found. Among the killed are Brevet Lieutenant Colonel Fetterman, Captain F. J. Brown and Lieutenant Grummond. . . . Depend upon it that the post will be held so long as a round or a man is left. Promptness is the vital thing. Give me officers and men. Only the new Spencer arms should be sent; the Indians are desperate; I spare none, and they spare none."

After the blizzard, at Fort Phil Kearny the soldiers who had stayed behind brought in the bodies of their friends and dug graves in cold so intense men could only work 15 minutes at a time. Colonel Carrington had his men lay a fuse to the ammunition magazine. Should the Lakota overwhelm the fort, the women and children were to be herded inside. ". . . in the event of a last desperate struggle, destroy all together, rather than have any captured alive."

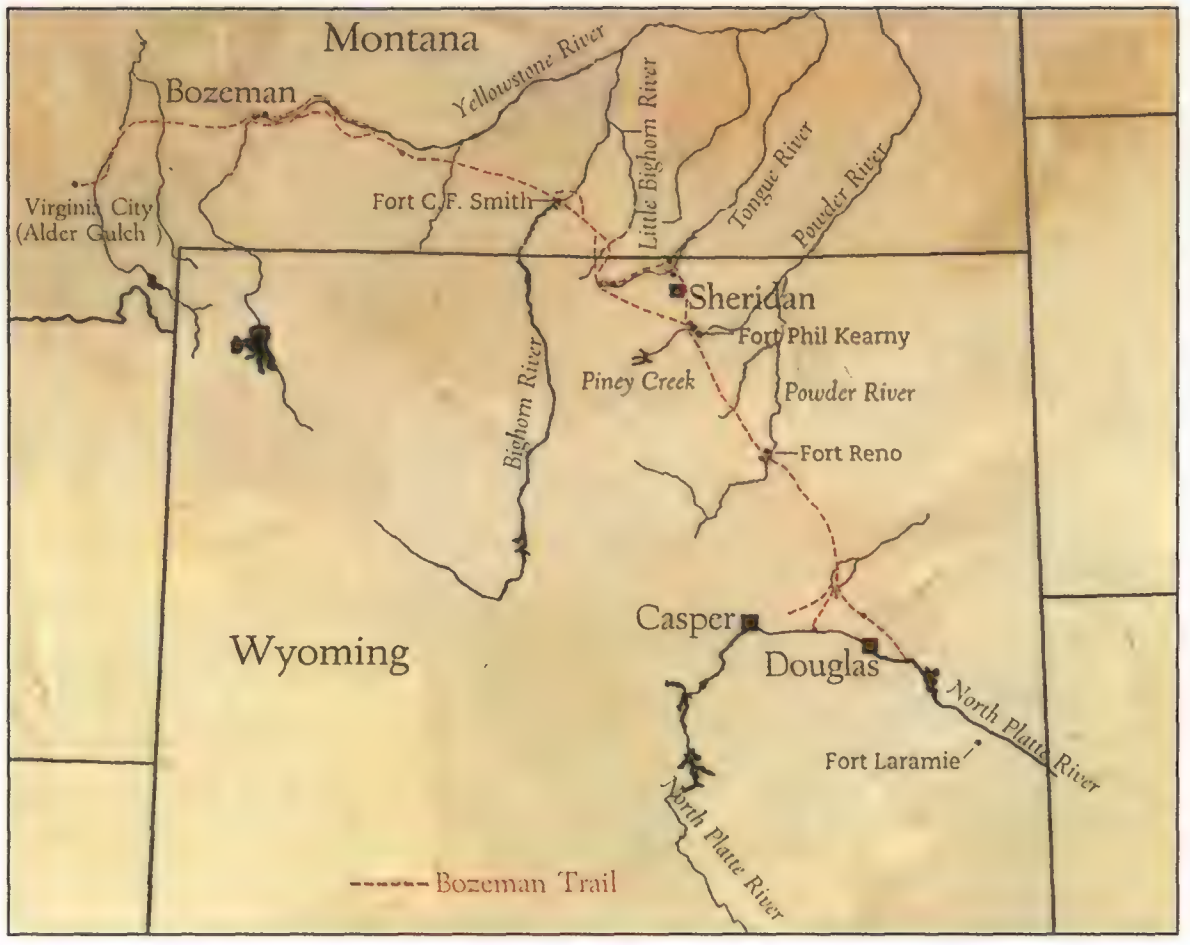
Whites called the Fetterman fight a massacre. The Lakota called it "The Battle of a Hundred Dead." It was the biggest, but neither the only nor last fight along what came to be known as "the bloody Bozeman Trail."

By the mid-19th century, neither Wyoming's Powder River country nor Montana's Yellowstone and Gallatin valleys—which the Bozeman Trail would traverse—were terra incognita. Trappers, scouts and prospectors knew the buffalo and Indian trails, and Army surveyors had already identified some good fords. Although these trails were adequate for small parties on foot or on horseback, wagon trains needed better. Broken country and long steep grades were avoided, and good graze and water for man and beast had to be available after each day's travel of about 20 miles.

Before the Civil War, as many as 50,000 Oregon Trail immigrants passed through Fort Laramie in a single season. The treaty of 1851 apportioned (or tried to apportion) disputed tribal hunting grounds and, even more important—from the white perspective—guaranteed the safety of westering immigrants.

On May 26, 1863, Federal troops opened the siege of Vicksburg, and a thousand miles to the northwest at Alder Gulch in what would become Montana Territory, Bill Fairweather made the richest gold strike since California. For placer gold mining, miners didn't need expensive equipment or capital to find riches: just good luck and a gold pan, for which a shallow washbasin would suffice.

Miner Portugee Phillips came out of the blizzard with the dreadful news.



The Bozeman Trail cut miles and days off the old wagon route through Wyoming to Montana but passed through the hunting territories of several tribes.

Gold rushers from the California diggings, merchants who catered to them, thieves and gamblers who preyed upon them—all raced north to these new diggings. Mountain man John Jacobs and his partner, natural-born promoter John Merin Bozeman, determined to find and promote a better route connecting the Oregon Trail to Montana's riches. Guides who knew such a shorter, easier route could ask five dollars from every wagon they led.

Bozeman and Jacobs' road would depart the Oregon Trail at the mouth of Sage Creek (near present-day Douglas, Wyoming) and traverse the dry alkaline plateaus in the rain shadow of the Wind River and Bighorn mountain ranges. Then it would slide west above the Bighorns, ford (later ferry) the Bighorn River and angle across the high prairie just south of today's Pryor, Montana, into the lush Yellowstone and Gallatin valleys, where a few pioneering farmers were already settling. At the tiny settlement (soon named Bozeman City), they'd jig south to Virginia City. Five hundred miles: three months' wagon travel. The Bozeman Trail was shorter, more direct, better watered and altogether a better wagon road than alternative routes, but there was one big drawback to the route.

On July 20, 1863, as Gen. George Meade pursued Confederates retreating from Gettysburg, at Rock Creek (near present-day Buffalo, Wyoming), 150 Sioux and Cheyenne warriors confronted Bozeman's first wagon train. An Indian leader warned, "You can't go on in the direction you are going. You are going into our country, where we hunt. This is the only good big hunting ground left for us. Your people have taken the rest or scared the game away.

"We won't let our women and children starve. This is where we make meat, and we will keep this land. . . . If you turn back to the Platte, we will let you go. We will not hurt you." Most of Bozeman's train followed this good advice and another route; Bozeman and a small party pressed on to Virginia City.

More gold strikes erupted at Last Chance Gulch, Silver Bow and Confederate Gulch. The federal government was not disinterested: the war was costing millions every day, and Montana gold helped prop up the new "greenback" paper dollars.

In 1864, despite Indian harassment, nearly a thousand immigrants traveled the Bozeman Trail. In 1865, after Gen. Robert E. Lee surrendered, the Army turned its attention to the pesky little problem out West. The government closed the Bozeman Trail to civilians and sent Gen. Patrick E. Connor with a thousand men to settle the Indian troubles once and for all. Despite ferocious rhetoric, Connor's expedition was a wreck. His men alternately froze and starved; the single Arapaho village Connor did find and attack had been, prior to his attack, friendly.

Neither General Connor's expedition nor Col. John M. Chivington's 1864 assault on a peaceful Cheyenne village at Sand Creek, Colorado, went unnoticed by the usually fragmented, often contentious small bands of Lakota, Cheyenne and Arapaho who would soon combine under a single war chief: the legendary Red Cloud. Chivington's and Connor's murderous blunders also stirred pro-Indian sentiment in the East, where worries about Indian wars and their effect on the occupation of the South and the protection of the transcontinental railroad also influenced policy.

Hence, in the spring of 1866, government peace commissioners invited the Indians, mainly Lakota, to Fort Laramie to sign a new treaty. While the Indians hoped to persuade the

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government to close the Bozeman Trail, the whites planned to keep the trail open by bribing the various tribes with annuities.

In a stunningly ill-timed move, during the treaty conference Col. Henry Carrington arrived with 700 men (500 of them new recruits) and instructions to construct three new forts to protect immigrants along the Bozeman Trail. Red Cloud was livid: "The Great Father sends us presents and wants us to sell him the road, but White Chief goes with soldiers to steal the road before the Indians say Yes or No." Seemingly oblivious to Red Cloud's anger, Carrington marched north, and built Fort Phil Kearny on Little Piney Creek (near present-day Sheridan, Wyoming) and Fort C. F. Smith on the Bighorn River.

Through 1866, despite numerous Indian attacks, some 2,000 individuals traveled the Bozeman Trail. Some were gold seekers, some freighters bringing merchandise to the forts or gold camps, but most were immigrants seeking a new life in the West. A surprising number kept diaries. Bozeman Trail authority Susan Badger Doyle, whose collection of these diaries has recently been published, says they were intended as guidebooks for other family members who might follow after.

"Rolled 9 miles to Humfrevilles Camp, where we found the next water.—Plenty of Grass & water for our stock, but hardly fit for our own use. . . . Soon after we watered the cattle and turned them out to graze a squad of Indians made a dash on one

Red Cloud's warriors rose from the tall grass and fell upon the soldiers.

of the herds, but the herders were on the alert and gave them a volley, which soon routed them. One of the Indians was seen to fall from his pony, and was helped on again by the others. They killed one ox and maimed several others, with their arrows. . . . " Sam Blythe, July 23, 1866. "No hopes of leaving here [Fort Phil Kearny] for several days by order of headquarters . . . I am meditating upon the adventure that I am about to take, counting the cost, summing up the danger, cold chills run through my blood." The Rev. William K. Thomas, July 31, 1866. At the Yellowstone, a young woman inscribed her hopes on a tree: "Jennie Sanderson. Bound for Virginia City in the Happie Land of Caneon."

Sam Blythe survived the Bozeman Trail, but the Reverend Thomas' fears were realized when, on August 24, 1866, Thomas, his 8-year-old son and two other travelers were killed and scalped by Indians. We don't know whether Jennie Sanderson reached the Happy Land of Canaan, but a later pilgrim carved an appreciation beneath her message: "Jennie you are a bully Gall."

As cold weather approached, immigrant trains were combined in greater numbers for safety, and the parties that went out to cut wood for Fort Phil Kearny's building needs and firewood were routinely attacked. By November, Fort Phil Kearny was under virtual siege. Cavalry horses were kept saddled at the gate for swift relief of attacked wood trains, and neither soldiers nor civilians were permitted to travel alone outside the fort's walls. Legendary mountain man and guide Jim Bridger, who had spent 40 years on the frontier, reported that 500 lodges had gathered on the Tongue River under Red Cloud. Red Cloud—who was to survive well into the 20th century—was an unusual warrior even among a warrior people. He'd counted coup some 80 times (Sitting Bull claimed only 45). Contemporary reports—Indian and white—stress Red Cloud's intelligence and charismatic leadership. Unlike Sitting Bull and Crazy Horse of the Hunkpapa Lakota, Red Cloud—of the Bad Face band—had spent his youth associating with soldiers and traders at Fort Laramie. Red Cloud understood white men.

Although Col. Henry Carrington was a punctilious garrison soldier, he'd never seen combat. On November 3, 1866, a genuine military hero joined his command. Capt. William Judd Fetterman was a soldier's son and grandson with a brilliant record under Gen. William T. Sherman during the Civil War. Fetterman may have believed he'd been posted to Fort Phil Kearny as Carrington's replacement. Certainly he was contemptuous of Carrington's cautious approach to the Indians. He boasted, "A single company of regulars could whip a thousand Indians," and famously, "With eighty men I could ride through the Sioux nation." Jim Bridger warned Fetterman that if he ever got into an Indian fight, it could well be his last fight.

White narratives about Indians have often revealed more about the white narrators than their Indian subjects. When the post-Civil War frontier and its opportunities for settlement seemed unlimited, whites called those who opposed settlement "murderous savages." One hundred thirty years later, as Virginia City presents a picture of tailing dumps and tourists, and Bozeman, Montana, is troubled by sprawl, those Indians who whipped Captain Fetterman are often seen through a green haze of ecological wishful thinking.

". . . White Chief goes with soldiers to steal the road before the Indians say Yes or No."

The great buffalo hunting grounds that Red Cloud's Lakota defended so ferociously had been won by them from others. Eighteenth- and nineteenth-century Lakota did not make

good neighbors. A warrior culture to the bone, they lumped almost all humankind into two categories: Lakota and enemy. The enemy's very existence was an excuse for warfare, and warfare was more or less continuous.

Like the whites, the Lakota had originated elsewhere. About 1760, pressed by Cree enemies, the Lakota began to move west from Minnesota onto the Great Plains, where they were attracted to the enormous herds of buffalo. The Oglala Standing Bull discovered the Black Hills in 1776.

With their new source of wealth (the buffalo) and new technology (the horse) the Lakota prospered. In the process they displaced the Kiowa and the Arikara, and by mid-century the Lakota and their allies, the Northern Cheyenne, were battling the Crow for traditional Crow hunting grounds.

Believing that the buffalo supply would be endless, when white traders wanted buffalo robes, the Lakota provided them in exchange for guns, gunpowder, lead for bullets, and blankets and whiskey. According to University of Montana historian Dan Flores, the Northern Plains Indians shipped 85,000 to 100,000 robes annually to St. Louis throughout the 1840s. Some traditionalist Lakota warned against robe hunting, but most blamed white encroachment for the diminishing buffalo population.

Flores says that from 1856 to 1864 severe droughts reduced the buffalo carrying capacity of the Plains by 40 to 60 percent. Altogether too frequently, Indian hunters came home empty-handed. In the Northern Plains, the remaining game found refuge in the Powder River and Tongue River basin—disputed turf that was too dangerous for hunting parties from the warring tribes to enter.

Vast herds of buffalo still thronged the hunting grounds of the Northern Plains Indians.

Although the treaty of 1851 allotted this country to the Crow, they were driven out of it by expansionist Lakota and Cheyenne. One Cheyenne explained this dynamic simply: "We stole the hunting grounds of the Crow because they [the grounds] were the best." And then, along came John Bozeman and his wagon train. All the elements were present for an explosive confrontation between whites and Indians.

The infantrymen Capt. William Fetterman mustered at 11 A.M. on December 21, 1866, carried Civil War-issue, muzzle-loading Springfield rifles. In expert hands, such rifles could be loaded and fired only three times per minute, and these recruits had not had much practice. Fetterman's 27 cavalrymen carried Spencer 7-shot breech-loading carbines, and the two civilians who accompanied Fetterman (because they didn't want to return East without a chance at Indian fighting) had 16-shot Henry rifles.

It was a clear, cold day. Snow lay on the ridges. A woodcutting party had been attacked, and Fetterman went to its aid. Carrington climbed onto the sentry walk to give an order he apparently never dreamed the fire-eating Fetterman might ignore: "Under no circumstances must you cross Lodge Trail Ridge!"

The Bozeman Trail left Fort Phil Kearny, crossed Big Piney Creek and climbed over Lodge Trail Ridge onto a 40-foot-wide spur above Peno Valley. Even now, the ruts of immigrant wagons are visible on that spur.

Today the place where they fought is grazing land, and the tall grass that concealed the Indians on both sides of the spur can only be imagined. The battlefield isn't very big—one can walk the interpretive trail in 20 minutes or so. But a little after noon on December 21, 1866, it was hell in a small place. Maybe Fetterman meant to obey his orders, but infuriating Indian decoys dashed just inside easy gunshot range, jeered and fled, shouting vulgar insults, drawing the soldiers into a trap. Fetterman's cavalrymen were lured away from the wood train, up over Lodge Trail Ridge, down off the spur, until the decoys splashed across icy Peno Creek and signaled to the

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waiting ambushers to close the trap.

When the trap snapped shut, 1,000 Indians rose out of the tall grass; Oglala and Miniconjou, Lakota, Arapaho and Northern Cheyenne. Terrible yells drowned out officers' commands. The cavalry apparently broke in terror and fled to refuge among rocks atop the spur a hundred yards above the infantry's position. The infantrymen kept their discipline longer, firing in volleys, then singly, until they began to run out of ammunition. The knife slash that cut Captain Fetterman's throat was deep enough to expose his neck vertebrae.

The cavalrymen loosed their horses, and for a few blessed moments fighting slackened while the Indians rounded up these prizes. When their scouts signaled that reinforcements were coming from the fort, the Indians attacked the surviving cavalry with knives and war clubs and lances and hatchets. Altogether, 81 soldiers fell to Red Cloud's onslaught. (Colonel Carrington's initial estimate of 94 dead was mistaken.) Some 40,000 arrows were fired—a thousand for every minute the fight lasted.

The shots echoed all the way East, where the newspapers told of Fetterman's awful fate.

When they heard the firing back at Fort Phil Kearny, Jim Bridger was reported to have said, "Yes. It is as I was afraid." The shots echoed all the way East, where the newspapers told of Fetterman's awful fate.

Western settlers were outraged and terrified. Ragtag militias were formed, and Colorado citizens drummed up $5,000 to purchase Indian scalps. When, in the spring of 1867, John Bozeman himself was killed by Blackfeet he'd mistaken for friendly Crow, the settlers' outcry was enormous.

But many Easterners didn't want a protracted Indian war. In March 1867 Congress had carved the South into military districts, and the transcontinental railroad still needed Army protection. Radical Republicans and President Andrew Johnson were on a collision course over Reconstruction policy, and the Bozeman Trail was not a high national priority. After the Fetterman fight, there were no more immigrant trains up the Bozeman Trail. The trail became a military road, existing only to support those forts originally built to protect it. On July 20, 1867, an Indian Peace Commission was authorized to make a treaty with Red Cloud, but Red Cloud rejected its overtures: he would not negotiate peace until the Bozeman Trail had been closed and the forts abandoned.

To punctuate Indian defiance, on August 1 and 2, 1867, Lakota warriors attacked a haying party at Fort C. F. Smith, and struck a wood party at Fort Phil Kearny in what became known as the Wagon Box Fight. In both, overwhelming numbers of Indians surrounded small parties of whites forted-up behind their wagons. The Indians circled the wagon corrals to draw fire, intending to make their final rush while the whites were reloading their muzzle loaders.

But two weeks before, the soldiers had been issued a new breech-loading rifle, the Springfield/Allen modification. The Indians waited in vain for a reloading pause, but the soldiers' fire was continuous, and after hours of

Chief Red Cloud of the Lakota had lived around whites and understood them.

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After the battle above, in which Fetterman (right) and his 80 men died, Red Cloud forced the closing of the Bozeman Trail.

fighting, the Indians were driven off. Some Army men and most Western settlers wanted to press this seeming advantage and mount unremitting war against Red Cloud and his allies. Influential Eastern whites were more pacific, and the government believed, as Red Cloud's biographer Robert W. Larson has written, ". . . it was cheaper to feed Indians than to fight them."

By this time, even the Crow had joined Red Cloud's demand to close the Bozeman Trail, and in March 1868, Gen. U. S. Grant gave orders to abandon the forts. Another peace commission—which included Gen. William T. Sherman—traveled to Fort Laramie, where it cooled its heels waiting for Red Cloud, who wouldn't meet until the forts were actually abandoned and the trail actually closed.

On the morning of July 28, 1868, at Fort C. F. Smith, Mrs. Elizabeth Burt wrote in her diary, "The soldiers fell into ranks in heavy field outfit for the 324 mile march to the railroad and as we considered it, civilization. The last hand baggage was loaded and the train formed. . . . As a final farewell the entire Crow tribe gathered on the plain in gala attire to see the command start."

Not long after the Army abandoned the isolated forts, their Indian allies, the Crow, left too, and at dawn the next day, Red Cloud and his warriors burned C. F. Smith. They went on to burn Fort Phil Kearny a few days later. Red Cloud waited until the Lakota's fall hunt was concluded before he met with the peace commissioners, but on November 7, Red Cloud finally signed the treaty.

Two years later, Red Cloud and a party of 20 Lakota traveled by train to Washington, D.C. to meet President Grant and confer with the Secretary of the Interior. When his white hosts showed him a 15-inch coastal gun that could fire shells weighing hundreds of pounds four miles, Red Cloud didn't think it would be much use against Lakota warriors. But Red Cloud was a realist about white power: "Now we are melting like snow on the hillside, while you are growing like spring grass." He traveled to New York City, where thousands lined Fifth Avenue to get a glimpse of the man who had destroyed Fetterman. In a speech at Cooper Union the next evening, he said through an interpreter that even though whites were clothed and ate tame meat and Indians were naked and ate wild meat, the Great Spirit wanted them to live in peace. As George A. Custer would discover six years later on the Little Bighorn, this, too, was wishful thinking, although Red Cloud never went to war again.

John Bozeman's trail prompted a war between conflicting visions of prosperity. For the Lakota warrior: limitless buffalo wealth and enough fighting to earn a warrior's reputation. For the white immigrant: limitless gold, limitless opportunity. Both peoples had gentler visions as well, but on the frontier these visions often went unexpressed. Even our bully girl, Jennie, was seeking Canaan, the promised land. Through the smudged lens of time, it's easy to deplore and admire both peoples. They seem not unlike ourselves.

Donald McCaig and his wife, Anne, operate a sheep farm in the Allegheny Mountains. Illustrator Francis Livingston lives and works in Sun Valley, Idaho.

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BY RICHARD AND JOYCE WOLKOMIR

ALONG WITH TWO FRIENDS WHO NEED A NEW PLASTIC DISH DRAINER, JAMES Twitchell, professor of 19th-century poetry at the University of Florida in Gainesville, is visiting a Wal-Mart. Twitchell gazes raptly upon the aisles stacked with TV sets in boxes, and picnic baskets and T-shirts and beach balls. So much mass-produced stuff! Twitchell is energized—as any dedicated scholar would be upon entering an archive packed with new material.

"Look at this wire shopping cart—it's the equivalent of the Las Vegas poker chip," he says. "In a casino, instead of gambling with your real money, you use little colored plastic disks, so it seems OK. This huge cart is something like that: it's so roomy you don't feel you're buying too much. Marketers fooled around with the size of these carts, getting them just right."

Twitchell loves this stuff. He loves it so much that he has switched from teaching and writing solely about Romantic-era poetry to buzzier issues, such as adolescents wearing dungarees slung low to reveal their Joe Boxers, and whether the Jolly Green Giant is an avatar of Zeus. And now, reveling in all these bedspreads and CD players and croquet sets and yellow raincoats, Twitchell tells his friends that one reason he began studying such fine points of mass marketing is that his parents, long ago, denied him Wonder Bread.

Twitchell's father, a Vermont physician, dismissed Wonder Bread as "air and water." His mother warned that Coca-Cola was sugar water that would "rot your teeth." Now he keeps a cellophane-wrapped loaf of Wonder Bread and an aluminum can of Coke—icons among American consumables—atop his computer monitor. In one of Twitchell's recent books, *Lead Us Into Temptation: The Triumph of American Materialism*, he wrote that everything he loved as a youth

By co-opting John Everett Millais' painting Bubbles in 1886, Pears' Soap blurred the line between advertisements and art; Coca-Cola employed a chubby-cheeked Santa Claus to boost winter sales.

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was from the forbidden mass culture: "It was mass produced, mass marketed and consumed en masse." And if he wanted to savor Pepsi and Whoppers and Dairy Queen sundaes, he had to do it on the sly, "for we would not countenance them inside the family circle."

Twitchell—who is now in his 50s, trim and urbane—says his study of mass culture, especially advertising, began 15 years ago, when he was teaching a class on the Romantic poets. "I suddenly realized my students had no interest in what I had to say." He asked them to complete a line from Wordsworth: "My heart leaps up when I behold a _____ in the sky." Nobody could supply the missing "rainbow," but his students could flawlessly recite the contents of a Big Mac: two all-beef patties, special sauce, lettuce, cheese, pickles and onions on a sesame-seed bun.

"It was an epiphany," he says.

At the time, the much-discussed book by E. D. Hirsch, et al., *Cultural Literacy: What Every American Needs To Know*, argued that cultures need the glue of shared knowledge, like who Napoleon was or where Beirut is. "I realized he was right, we do need a body of information," explains Twitchell. "But he was wrong about what body of information we share, because it isn't from high culture—it's from pop culture, the world my students knew so well." His students knew little about Dickens or Keats. "But they could recite the 'Mmm, mmm good' Campbell's Soup jingle," he says. "They didn't know Rembrandt, but they could tell you Ben's and Jerry's last names." Twitchell was stunned. "I wanted to know why the stuff they knew was so powerful it pushed my stuff out of the way."

Since then, he has been observing himself, his law professor wife, his two daughters, now grown, his colleagues, students, neighbors. He has invited himself into advertising agencies as an academic gadfly on the wall. He has explored advertising's history. And he has learned the average adult now encounters some 3,000 advertisements every day, from bus flanks to messages over the telephone as the caller waits on hold. He has probed the impact of all that mass marketing in such works as *ADCULTUSA* and his latest book, *Twenty Ads That Shook the World*.

Academics usually excoriate modern materialism as spiritually deadening and socially corrupting, he observes. "My own take is that humans love things, and we've *always* been materialistic, but until the Industrial Revolution only the wealthy had things—now the rest of us are having a go at arranging our lives around things." Especially in the past

Clutching his childhood taboos—Coke and Wonder Bread—advertising analyst James Twitchell sits atop his archives.

STEVE GOTTLIEB

20 years, young people have had lots more money to spend. "Now they're driving the market for mass-produced objects." And especially for youths, Twitchell maintains, advertising has become our social studies text. "Ask 18-year-olds what freedom means, and they'll tell you, 'It means being able to buy whatever I want!'"

But advertising's job is not just urging, "Buy this!" Twitchell cites 1950s ad ace Rosser Reeves, who created a television commercial in which a hammer clangs an anvil to remind viewers how a headache feels (or maybe to induce one) while reporting good news: Anacin is "for fast, Fast, FAST relief. . . . " Reeves would hold up two quarters. It was advertising's task, he said, to make you believe those two quarters were different. Even more important, the ad had to persuade you that one of those quarters was *worth more.*

The manufacturer of Pears' Soap noted, "Any fool can make soap. It takes a clever man to sell it."

To illustrate the process, Twitchell points to 1930s ads claiming Schlitz steam-cleaned its beer bottles. What the ads omitted was that all brewers steam-cleaned their bottles. Thus, through advertising, the company achieved "ownership" of product purity—it created for itself what the ad industry calls a USP (Unique Selling Proposition).

According to Twitchell, it was in the Victorian era that mass culture reared up, driven by the steam-powered printing press, which spewed out text and images and notions for the "mob." Victorians invented the word "mob," he says, by shortening the Latin *mobile vulgus*, "rabble on the move." Victorian education strove to differentiate literature from pulp novels, to show classical music's superiority to dance-hall tunes, to instill "art appreciation." But with the machine age churning out cheap goods, consumerism was erupting all over, and so was advertising.

Thomas J. Barratt, the 19th-century manufacturer of Pears' Soap, noted: "Any fool can make soap. It takes a clever man to sell it." And Barratt was just that man. "The manufacture of soap is a turning point in civilization," says Twitchell. Originally, farmers boiled animal fats with wood ashes and molded the result into soap balls, which soon stank. With the machine age came soap concocted from caustic soda and vegetable fats, pressed into bars that lasted forever. But one soap was much like another.

In 1881, at James Gamble's soap factory in Cincinnati, a worker forgot to turn off the mixing machinery, inadvertently producing a batch of soap so air-filled it floated. Gamble claimed his new soap, Ivory, floated because it was pure—in fact, 99 44/100 percent pure.

Earlier, England's Andrew Pears—the father-in-law of Thomas J. Barratt—had developed a translucent soap. It seemed a natural to appeal to the class-conscious Briton's desire for whiter skin, versus a laborer's weathered tan. Barratt got the message across in such ways as plastering his company's new slogan, an early version of Nike's "Just Do It," on walls all over the British Empire: "Good Morning! Have You Used Your Pears' Soap?"

But Barratt's greatest coup was co-opting *Bubbles*, a John Everett Millais painting of the artist's angelic grandson watching a just-blown soap bubble waft upward. Barratt sold Millais on the notion that, distributed as a free poster, his painting would reach thousands upon thousands of potential new art lovers, for their edification. For their further edification, Barratt had a cake of the soap lying in the painting's foreground, inscribed "Pears'."

Branding made advertising possible. In the early 1800s, soap was just soap. Like biscuits or nails, it came in barrels,

Ads create and then promise to absolve you of secular sins, such as halitosis or dandruff.

and to get some, you told the store clerk, "Two bars of soap, please." By the late 1800s—nudged by Barratt's advertising—you might specify Pears' Soap.

Twitchell says Barratt's hijacking of art to sell soap "blurred, for the first time and forevermore, the bright line between art and advertising, between high culture and the vulgar, between pristine and corrupt." Today, art co-opted by advertising is so commonplace we do not blink at Michelangelo's *David* wearing Levi's cutoffs.

Back in the Wal-Mart, Twitchell veers toward a barrel displaying kitchen floor mats. "Two for five dollars!" he says, reading a sign. It is clearly tempting. Two floor mats, one price. But he pulls himself away from the alluring floor mats to ruminate about literature. "I'm supposed to teach English Romantic poetry," he says. "That period, the beginning of the 19th century, is where many of our views on materialism came from, because that was when the Industrial Revolution began producing the surfeit of things that will cause the trouble."

Surpluses produced by the new technologies, like steam power, were particularly apt to pile up after wars, and that was especially true in the aftermath of the Civil War. "What it takes to win a war is the ability to produce more war materials than your opponent, but when the war ends you have too many blankets, boots, rifles, and too much patent medicine—which was the subject of the first real advertising," he explains. "In the 1870s we had the rise of advertising, along with the rise of newspapers, and now we start talking about two nostrums or two pairs of boots as if they were different, when we know they are the same."

Modern advertising, Twitchell insists, learned its stuff from religion. "I grew up a Vermont Congregationalist. My father was a doctor in our town, and his father had been a doctor in our town, and my mother's family had lived around there since the Revolution." His was, except for Wonder Bread denial, a stable life. "In the world where I grew up, you knew who you were by a series of time-tested anchors—ancestry, land, religion, where you went to school, your accent, your job—but we've been rapidly losing those anchors," he argues. "One marriage out of two ends in divorce, the average person changes jobs seven or eight times during a lifetime." With the old determinants of social position shifting or gone, he says, "we're starting to build our identity around driving a Lexus or displaying Ralph Lauren's polo player on our shirt."

The original Jolly Green Giant made children wail; he was re-created as a friendly strongman.

He notes that many of modern advertising's founders had religious backgrounds. A Baptist minister's son, Bruce Barton, cofounded the large ad agency Batten, Barton, Durstine & Osborne (which comedian Fred Allen suggested sounded like "a trunk falling downstairs"). Artemas Ward, who wrote psalms to Sapolio Soap, was the son of an Episcopal minister. John Wanamaker, whose marketing genius helped create the modern department store, once considered becoming a Presbyterian minister. Rosser Reeves, creator of the Anacin anvils, was the son of a Methodist minister.

Twitchell contends that these founders of modern advertising, and others like them, modeled their messages on parables they heard in church. He sketches a typical TV commercial in which someone is distressed. Perhaps it is a young woman, if the product is a dish detergent. Perhaps it is a middle-aged man, if the product is a cold remedy. The heroine or hero consults another person who gives witness: a certain product "works miracles." The product is tried. Relief! Ads create and then promise to absolve you of secular sins, such as halitosis or dandruff, or "ring around the collar" or "dishpan hands."

But Twitchell says that advertising also reaches back to paganism. Instead of Zeus in the clouds and dryads in trees, we have televisions that are inhabited by the Jolly

PILLSBURY COMPANY/GREEN GIANT

Kodak ads universalized the tradition of blowing out birthday-cake candles and other "Kodak Moments."

Green Giant, the Michelin Man, the Man from Glad, Mother Nature, Aunt Jemima, the White Knight, the Energizer Bunny and Speedy Alka-Seltzer with his magical chant: "Plop, plop, fizz, fizz. . . . "

Commercial culture is so potent, Twitchell believes, that it has "colonized" society. For instance, Christmas was low-key until the 1800s, when stores reinvented the holiday to sell off their surpluses. On December 24, 1867, R. H. Macy kept his Manhattan store open until midnight, setting a one-day sales record of more than $6,000.

Santa started as "a weird conflation of St. Nicholas (a down-on-his-luck nobleman who helped young women turn away from prostitution) and Kriss Kringle (perhaps a corruption of the German *Christkindl*, a gift giver)." Today's familiar Santa, Twitchell continues, originated in the 1930s, because Coca-Cola's sales slumped in winter. Ads began showing Santa—in his modern persona—relaxing in a living room after toy delivery, quaffing a Coke apparently left for him by the home's children. "Coke's Santa was elbowing aside other Santas—Coke's Santa was starting to own Christmas."

Rudolph the Red-Nosed Reindeer was a 1930s creation of a Montgomery Ward copywriter. And Twitchell says Kodak ads universalized the tradition of blowing out birthday-cake candles and other "Kodak Moments" to "show what you can do with fast Kodak film and the Kodak Flashmatic attachment on your Kodak camera."

Ads have even changed our attitude toward debt, which once could lead to prison. "Think only of how consumer debt was merchandised until it became an accepted habit, not an abhorred practice," observes Twitchell. "Think only of how the concept of shine and 'new and improved' replaced the previous value of patina and heirloom." Twitchell says politics hit its modern ad-driven stride starting with the 1952 "Eisenhower Answers America" Presidential campaign, designed by Rosser Reeves. Regarding his own ads, Ike said ruefully: "To think an old soldier should come to this."

Two-fisted "grimefighter" Mr. Clean rescued housewives from drudgery and dirt.

Athletes have become logo-bedecked living billboards. But Twitchell argues that commercial culture has affected us all. Cereal, for example, is now synonymous with breakfast. "Before Messrs. Post and Kellogg, this meal consisted of breaking fast by finishing last night's dinner," he says, adding that leftovers went to the family dog. Dog food was a creation of Ralston Purina's ad agency. Twitchell says that some marketing ploys fizzled, of course, citing an old ad headlined: "Sunday is Puffed Grain Day."

Mother's Day began in the early 1900s when Philadelphia merchandiser John Wanamaker elevated to stardom a local woman mourning for her mother. He ran full-page ads in the *Philadelphia Inquirer*. Soon only a blackguard would fail to buy Mom a present on her newly special day. Wanamaker reportedly gloated that he would rather be the founder of Mother's Day than the king of England.

Twitchell is no longer amazed that his students, inundated with commercial messages, display their status with manufacturers' logos on their shirt pockets or on their sunglasses. "At a Palm Beach store a woman explained to me that the more expensive the sunglasses, the smaller the logo, so that with Cartier you can barely see the *C*." His students derogatorily refer to certain classmates as "Gaps," after the retail chain where they buy their clothes. In the 19th century, people learned manners from novels and magazines; in the 20th from sitcoms and ads. When his daughter was a teenager, he heard her telling friends, after watching a teen TV show, *90210*, "Can you believe how cool Kelly looked in Dylan's Porsche!" Twitchell shrugs: "That's all they have for Trollope."

Economist Thorstein Veblen coined the term "conspicuous consumption": displaying possessions to impress others. "Between ages 15 and 25, we males consume the most as a percentage of our disposable income because we're displaying our feathers to potential mates," says Twitchell. "Now it's more complicated because females are working and they can display too."

PROCTER & GAMBLE

Levi's appropriated Michelangelo's Sistine Chapel fresco for this 1970s ad in which God gives Adam life—and a pair of jeans.

But the urge wanes. "After about age 45, many people start moving away from acquisition. Thus, ads, TV shows, and movies, which are studded with paid-for product placements, concentrate ferociously on youths, who seem to get the message.

But not all analysts agree with Madison Avenue's youth fixation. In fact, according to Beth Barnes, an associate professor at Syracuse University and chair of the advertising department at the S. I. Newhouse School of Public Communications, advertisers are increasingly recognizing that the over-45 age-group is growing fast. And older Americans often have the magic ingredient: disposable income. "I think the change is slow, but inevitable," Barnes says. For one thing, she notes, advertising is increasingly segmented, exploiting today's highly segmented media to aim fine-tuned messages at specific subcultures, including age-groups. "Advertising for soft drinks may stay aimed at youth," she says. "But the trick is to go after older people with products in which they are not set in their ways—computers, for instance, or travel and tourism, or financial services, or new products, like Chrysler's PT Cruiser."

"Often advertising is not about keeping up with the Joneses, but about separating you from them."

About a year ago, marketing circles buzzed over the surprising number of over-45 on-line shoppers. "It makes sense. They're amazingly machine savvy—my mother just got a new computer because her old one was too slow."

It is true, Barnes continues, that younger people may be less loyal to brands, and easier to woo away. But she adds: "There's a flip side to that—young people are lot more skeptical too!"

Perhaps. "Why," asks James Twitchell, "are my daughters willing to buy a bottle of water worth two cents and pay $1.50?" They aren't buying the product itself; they're buying the values that advertising has attached to the product, such as being hip. He cites a Madison Avenue adage: "You don't drink the beer; you drink the advertising."

Many of today's ads leave the average reader or viewer totally confused about what is being sold. For instance, in one current TV commercial, a cool young couple is driving down a city street, their car's windshield wipers clacking. They are so tuned in, they notice that the passing scene is rife with tempos, such as a boy bouncing a basketball, all in perfect sync with the rhythmic clack of their windshield wipers. What is going on?

"Often advertising is not about keeping up with the Joneses, but about separating you from them," Twitchell points out. "That's especially true of advertising directed at a particular group, such as adolescents or young-adult males—it's called 'dog-whistle' advertising because it goes out at frequencies only dogs can hear." In this case, the

YOUNG & RUBICAM/LEVI STRAUSS & COMPANY

Such an ad may look senseless to a 50-year-old, "but it's being properly decoded by a 23-year-old."

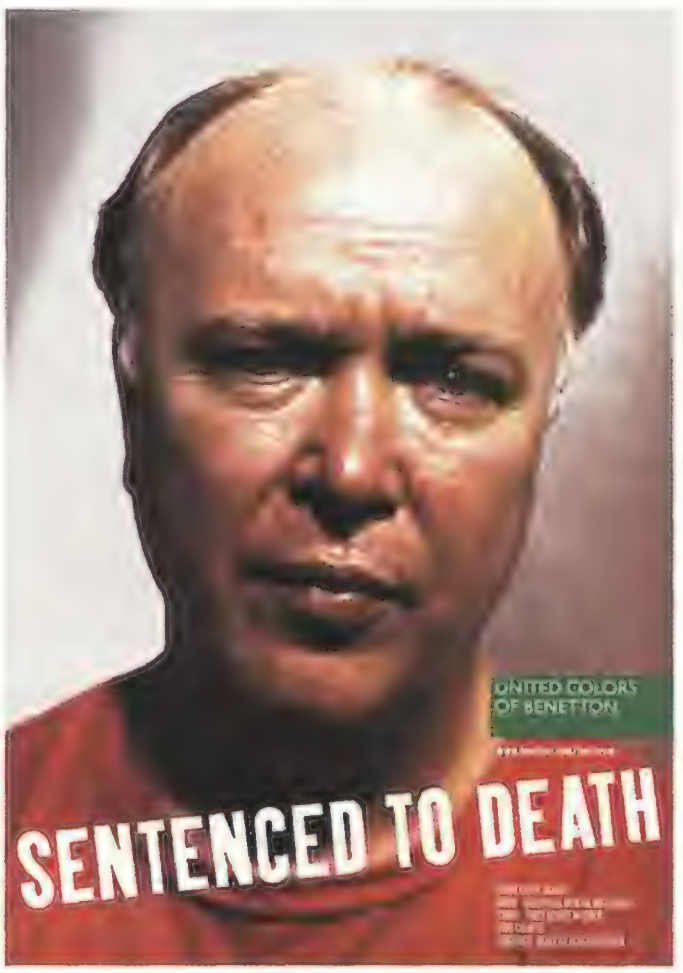
"dogs" are the commercial's target group of young adults. The young couple is hip enough to be driving their model of Volkswagen. "The idea is, your parents can't understand this, but you can." He cites a recent advertisement for a new sport utility vehicle that actually has the headline: "Ditch the Joneses!"

The most egregious example of this oblique marketing ploy was, of course, Benetton's spate of ads that employed the force of shock in order to create product recognition. The image of a nun and a priest, locked in a passionate kiss, was offensive to many people. But the pièces de résistance were Benetton's portraits of 25 death row inmates in America's prisons. This ad campaign cost Benetton its lucrative contract with Sears, Roebuck & Company and ended Oliviero Toscani's 18-year career as Benetton's creative director.

Such an ad may look senseless to a 50-year-old, Twitchell says, "but it's being properly decoded by a 23-year-old." It works. Today's average American consumes twice as many goods and services as in 1950, and the average home is twice as large as a post-World War II average home. A decade ago, most grocery stores stocked about 9,000 items; today's stores carry some 24,000.

Twitchell says he does not believe for a minute that our commercial society is a better world. "But it might be a safer world, oddly enough, if we value machine-made objects about which lies are told, rather than feuding over how to save souls," he says. "And we may be moving into a quieter world as people who were never able to consume before begin getting and spending."

He points upward, to the Wal-Mart's ceiling, with its exposed girders, pipes, wires and ducts, painted industrial gray. "That's to give you the illusion that you're buying stuff as close to the factory as possible," he says. His eyes fix upon Kraft Macaroni & Cheese boxes, each inscribed "The Cheesiest." He says, "It looks like a cornucopia, and the message is, 'Take one!' And see, the stack still sits on its freight pallet, to give you the idea there aren't many middlemen between you and the factory price."



Public outcry forced Benetton to kill its "shock" ad campaign showing portraits of death row inmates.

Everything in the store is a brand-name product. "See, a stack of Fedders' air conditioners in their boxes. It was Wal-Mart founder Sam Walton's great insight that if he sold only branded items and negotiated lower prices, the manufacturers would do all the advertising for him."

Twitchell wanders back to the alluring display of floor mats that had first attracted his eye. He stares, transfixed. "Two for five dollars! I came in here meaning to buy one. That idea of two seemingly for the price of one took hold in the 1940s, especially with Alka-Seltzer, which you originally took as only one tablet until they halved the dosage so you'd take two: 'Plop, plop. . . . '"

A few steps farther, he eyes a display of bottled mineral water. "This one is made by Pepsi. When they studied its marketing in Wichita, they were astonished to find out that buyers of these lower-priced mineral waters didn't care if it came from underground springs or runoff from Alpine glaciers—they bought the water because they liked the name and the feel of the bottle in their hand."

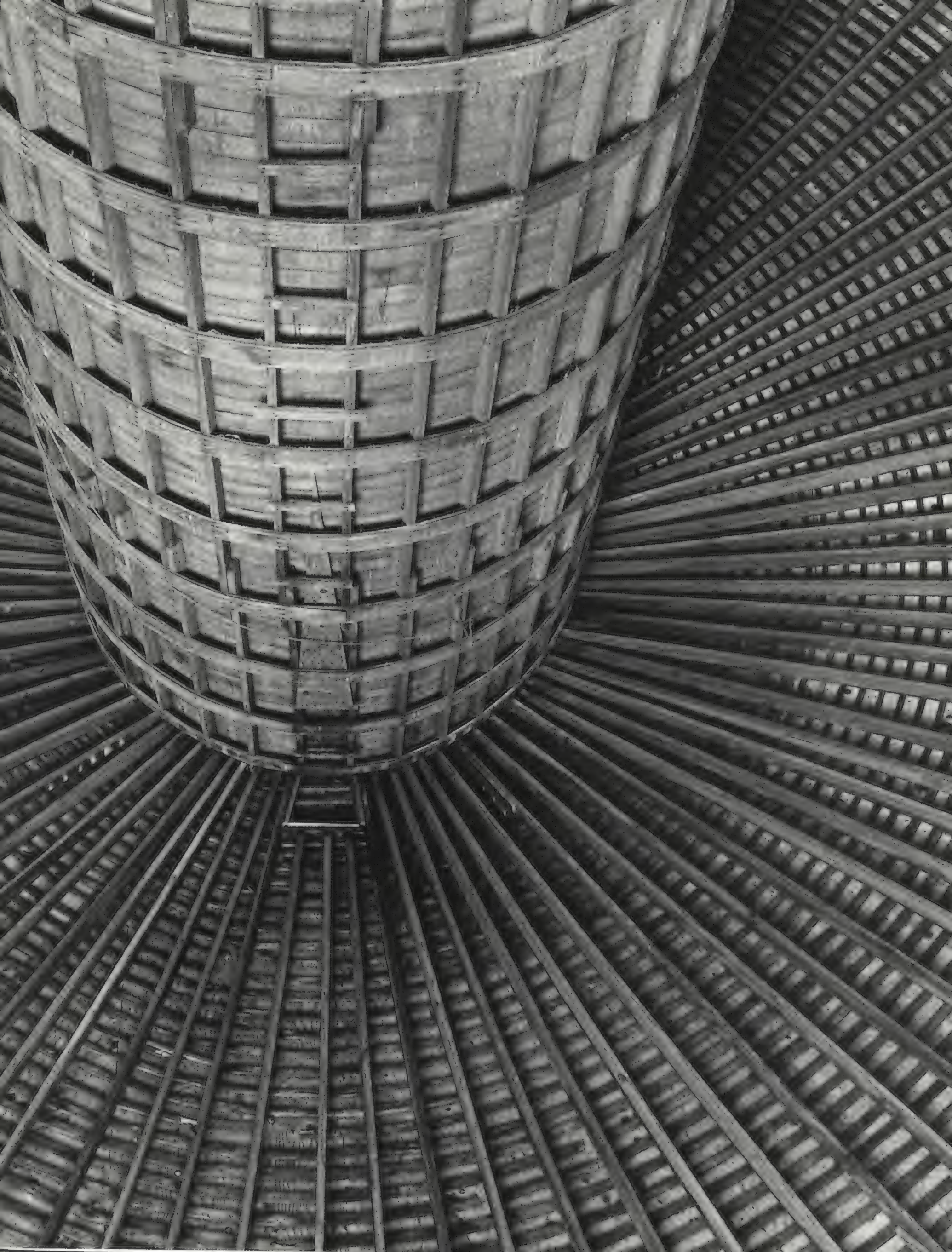
He pauses at a rack of greeting cards. "It's how we exchange emotions now, the commercializing of expression. The most touching are the cards to send to kids, offering your sympathy because their parents just got divorced." Such cards perform a useful service. "They're facilitators of difficulty, and they help us handle emotionally fraught events quickly and efficiently."

As his friends prepare to leave the Wal-Mart, without the dish drainer they had sought, Twitchell stops. "I'm going to go buy those two floor mats, but after you leave, because I'm ashamed to be seen succumbing to that two-for-the-price-of-one deal," he says.

Even so, Twitchell—deprived as a boy of Wonder Bread and Coke—believes the stuff cramming our stores, which advertisements strain to get us to buy, is not necessarily invidious to our cultural health. "After all," he says, "we don't call them 'bads'—we call them 'goods!'"

Richard and Joyce Wolkomir's article "Reading the Messages in Everyday Things," about John Stilgoe, appeared in April 2000.

UNITED COLORS OF BENETTON



A Lofty Tribute to Barns

PHOTOGRAPHS BY DAVID PLOWDEN

Above: Fulton County, Indiana
Left: Silo in a round barn, Angola, Indiana

Above: Oriska, North Dakota
Left: Canaan, New Hampshire

DAVID PLOWDEN HAS ALWAYS BEEN A PHOTOGRAPHER WHO thinks big. Many of his evocative black-and-white pictures celebrate subjects—steam engines, steel mills, steamships, truss bridges—that are remarkable not only for their size but also for their precarious status. Now, at 68, Plowden is focusing on yet another impressive American icon that is vanishing from the scene even as he preserves its homespun majesty on film—the barn.

When he began photographing agricultural buildings in Vermont during the early 1960s, Plowden was haunted by the sense that he was one step ahead of their demise. "Interstate highways were beginning to transform the landscape and the culture," he recalls, "and it was clear to me that the traditional family farm was on the way out."

Nationwide, the number of farms has plummeted from well over six million a half-century or so ago to around a third of that today. Farms and farm equipment are much bigger than they used to be, and consequently most of the vintage buildings that once defined our rural landscape have become obsolete. In Wisconsin, Iowa and a number of other states, preservationists are hard at work trying to save them (SMITHSONIAN, August 1989), but too many have long since succumbed to abandonment, dereliction and the wrecker's ball.

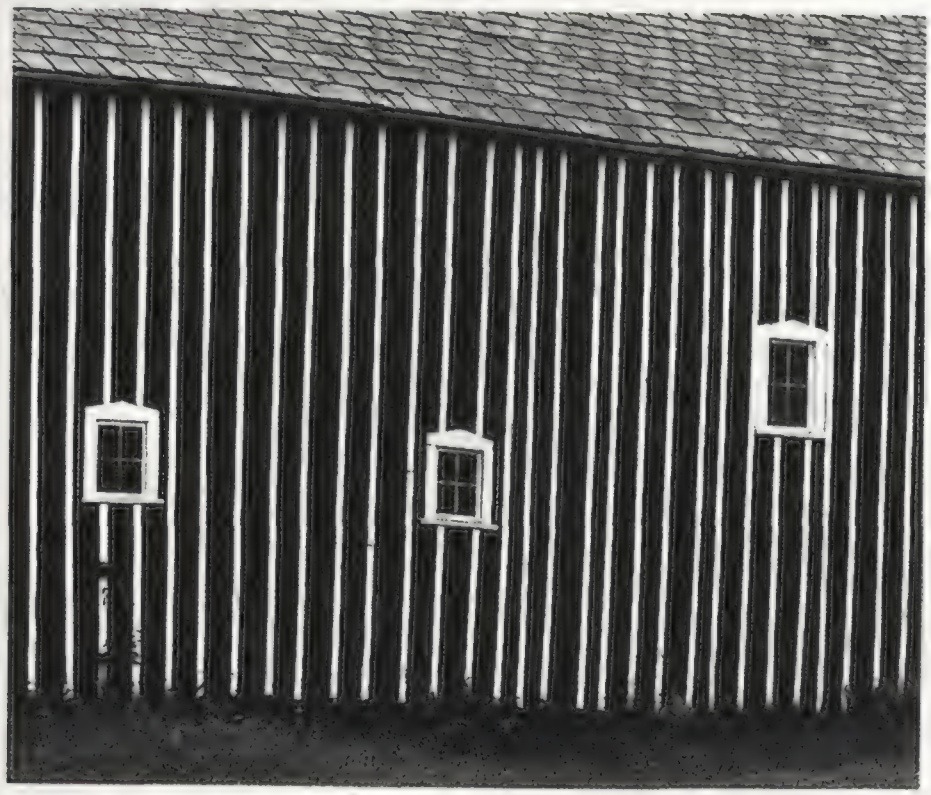
In the mid-1970s Plowden spent several weeks in central Michigan. "That part of the state was filled then with beautiful barns that were being used. They were all over the place. Today only one of the buildings I photographed there is still on a working farm. All of the others have been abandoned."

No wonder Plowden's passion for barns is tinged with regret. "There's such a moving elegance to their simplicity," he says. "It is the beauty of the commonplace. A barn is an expression of the pride of the people who built it. When we lose one, we've lost a part of our history, a part of ourselves." *—Jim Doherty*

Sharpsburg, Maryland

Isabella County, Michigan

Sangerfield, New York



Algiers, Vermont

Burlington, Vermont

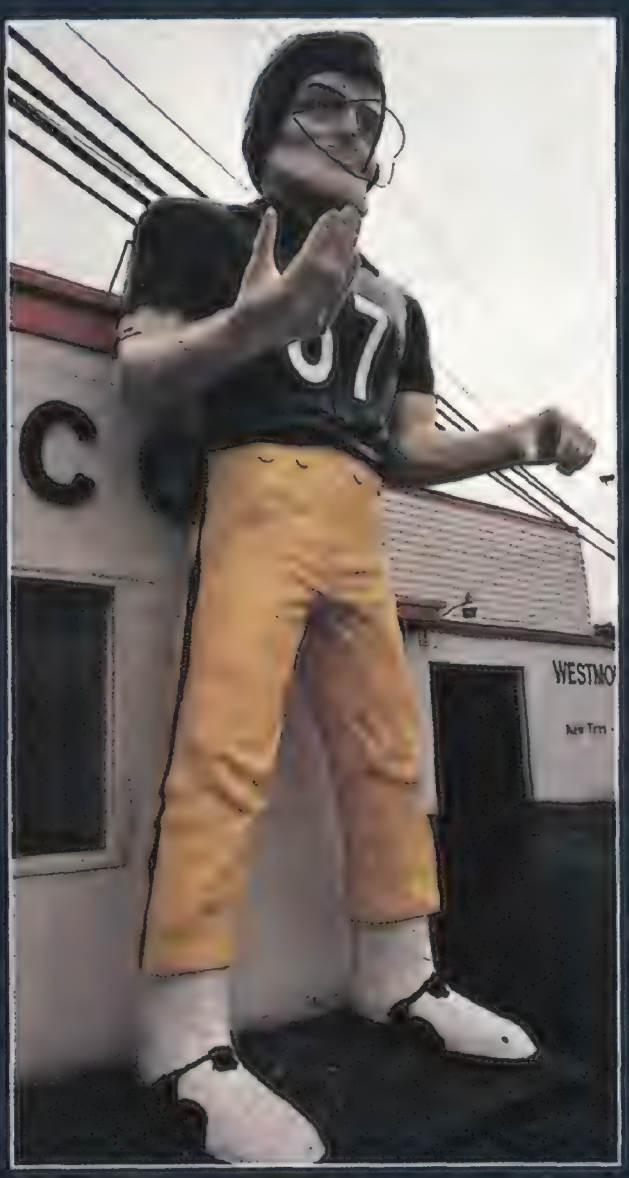
Wolcottville, Indiana

Tedrow, Ohio

The Judith Basin, Montana

Waukon, Iowa

Wilmington, Illinois



Greensburg, Pennsylvania

North Platte, Nebraska

Havre de Grace, Maryland

Wanted: BIG MEN

IN THEIR TRAVELS ACROSS THE UNITED STATES, the authors of *The New Roadside America* (1992) have come across some pretty wacky attractions: beer-drinking goats, a 17,400-pound ball of twine and the grave sites of circus elephants. "In the midst of all this," says Doug Kirby, "we kept finding these huge fiberglass men." So he and his colleagues, Ken Smith and Mike Wilkins, posted some pictures on their Website in 1996 and dubbed them "Muffler Men" because several grasped giant mufflers. (Smith stands underneath the Indian, opposite, with Kirby.)

In a matter of days, sightings of large fiberglass men poured in from across the country; true Muffler Men are easily identified because they share common features. They are 18- to 25-feet tall and stand with arms bent forward, right palm up, left palm down. Each has a steely jaw, and well-muscled arms popping out of a short-sleeve work shirt. At last count, Roadside America's Web map shows 165 confirmed sightings, spread across all but Delaware, Rhode Island, Vermont, New Hampshire, Arkansas, Kentucky and Wyoming, in the continental United States.

"Curiously," says Kirby, "the owners didn't know where they came from." Finally, in the spring of 1999, the Webmasters solved the mystery when they received an e-mail from entrepreneur Steve Dashew, who had seen their Website. His California company, International Fiberglass, had created thousands of commercial statues in the 1960s and '70s to help sell mufflers and tires. Dashew has long since gone on to other endeavors, but his creations have lived on; they've been resold, painted, moved and resold again, mutating into curious fiberglass fantasies of the quintessential American man: loggers, football players, cowboys and Indians, soldiers and spacemen. They've been won in a divorce settlement, pictured in the film *Easy Rider* and zoned as a flagpole in Cheshire, Connecticut.

"What's great about them," says Kirby, "is that they keep moving locations and changing appearances." So if you see a Muffler Man by the side of the road, you might want to tell the folks at www.roadsideamerica.com about it. But beware of imposters. Remember, right palm up, left palm down. —*John F. Ross*

KIRBY, SMITH AND WILKINS/ROADSIDEAMERICA.COM

Woodstown, New Jersey

FOR NEARLY 25 YEARS, KENESAW MOUNTAIN LANDIS IMPOSED HIS IRON WILL ON EVERY FACET OF THE GAME

The Judge Who Ruled Baseball

BY BRUCE WATSON

BACK WHEN BASEBALL WAS WIDELY CONSIDERED A PASTIME AND not a business, when fans wore fedoras instead of baseball caps and players had nicknames like Lefty and Pepper, the game's integrity rested in a single office. A player ordered to report to that office took a cab to 333 North Michigan Avenue in downtown Chicago. After riding the elevator to an upper floor, the player would tread softly on hallway carpet until reaching a door. On it was stenciled a single word—BASEBALL.

Behind baseball's door stood all the trappings of authority. Tall shelves were lined with law books. Greeting the player, a secretary told him to have a seat. The judge would be right with him. As the player sat, a stream of populist profanity spewed from the adjacent office. "Pishtush! You tell that blankety-blank SOB that I said . . . " Moments later, the player was summoned into the next room. In the middle of it was a desk cluttered with papers. A box of chewing tobacco sat on the desk; a spittoon stood alongside. And striding forward, extending a bony hand, was the short, wiry man who served as baseball's judge, jury and Julius Caesar.

From the seasons of a young Babe Ruth to the days of Joe DiMaggio and Ted Williams, Judge Kenesaw Mountain Landis was baseball's court of last resort. As commissioner, he imposed his iron will on every level of the game, from minor league squabbles to major league scandals. He overruled trades. He banished players for life. He suspended Babe Ruth as easily as he had once subpoenaed John D. Rockefeller. Ostensibly, Landis worked for the owners who hired him in 1920, yet his contract stated that he could not be fired, docked in pay or criticized in public. He had the authority to investigate anything "suspected to be detrimental to the best interests of the national game," and he never hesitated to use that authority. These days, some call Landis "the only successful dictator in American history," while others regard him as "the savior of baseball." But throughout his nearly 25 years in charge of the game, owners, players and fans called him "the judge."

With his perpetual scowl and bold shock of white hair, Landis looked like God in a three-piece suit. He lived in elite hotels,

As baseball's commissioner, Landis looked solemn even when throwing out the ceremonial pitch at a World Series game.

Landis always addressed players as gentlemen and watched over them like a hen over her chicks.

dining from room service, yet he chewed tobacco like a slugger and swore like a sailor. Where did baseball find such a character? "The legend has been spread that the owners hired the Judge off the federal bench," the feisty player and manager Leo Durocher remembered. "Don't you believe it. They got him right out of Dickens." Born in 1866, Landis was named for the mountain in Georgia where his father, a Union surgeon on the march with General Sherman, nearly lost a leg. (Abraham Landis, for reasons known only to himself, chose an alternative spelling of Kennesaw, dropping one "n.") When he was growing up in Logansport, Indiana, kids called the young Landis "every damned thing they could think of," he recalled. But his older siblings, noting his imperious air even as a boy, dubbed him The Squire. Though he grew to just 5 feet 7 inches, he commanded respect. During the early 1880s, he played first base for the Goosetown, Indiana, semipro team and became its manager at 17. Offered a pro contract, he turned it down, preferring to play "merely for sport and the love of the game." He was also a fierce bicycle racer, winning many medals at county fairs, yet he did not seem likely to succeed at much else.

Unable to sit still in class, Landis dropped out of high school. He worked as a handyman, sold newspapers and eventually became a court reporter. In the courtroom, the indifferent student proved himself adept at winning influential friends. In 1886 he began a rapid rise. First, an acquaintance who became Indiana's Secretary of State made Landis his aide. A year later Landis was admitted to the Indiana bar. Back then, he remembered, "All a man needed was to prove that he was 21 and had a good moral character." Eventually, however, he enrolled in a law school in Chicago, where, after graduating, he hung out a shingle. Then in 1893 came another quantum career leap. Abraham Landis' former commanding officer, Walter Q. Gresham, became Grover Cleveland's Secretary of State. Gresham quickly appointed the younger Landis his personal secretary. At the ripe old age of 26, Landis found himself hobnobbing with diplomats. Eventually, he even represented the U.S. Department of State at Cabinet meetings. Cleveland later offered Landis the post of minister to Venezuela, but by that time he had met a charming socialite, Miss Winifred Reed. In 1895 he returned to Chicago, got married, practiced law and became a fixture at Cubs games.

He was never one of the boys, but Landis wasn't publicity shy, either. After the Yankees won the World Series in 1943, he posed primly while they celebrated.

Baseball at the turn of the century was as different from today's game as Boston's creaky Fenway Park is from the Toronto Skydome. Back then, players were raw farm boys, immigrants fresh from mill towns, and backroom brawlers with something to prove. The Chicago Cubs were by no means the best team in baseball—John McGraw's Giants, Connie Mack's Athletics and Fred Clarke's Pirates were better—but by 1906 they would be. Their games, all played under the natural light of the sun, made truants of schoolboys and a slacker of one feisty lawyer in particular. "Can't we get a postponement of the case until tomorrow?" Landis once asked an opposing lawyer. "Brownie is pitching against Matty and I just can't miss that." Mordecai Peter Centennial "Three Finger" Brown was the Cubs' star pitcher and Landis' favorite; Christopher "Christy" Mathewson was the star pitcher of the New York

AP/WIDE WORLD PHOTOS; P. 121 UPI/CORBIS-BETTMANN

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Todd & Jennifer, Homeowners
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Bill, Contractor

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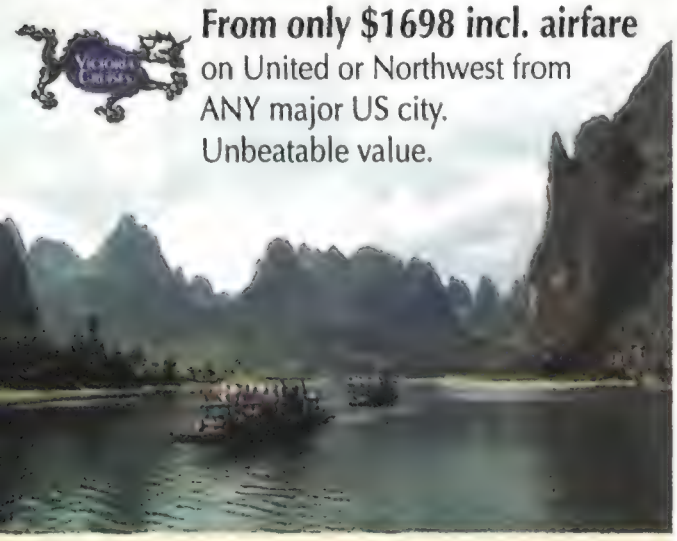

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The renowned N.Y. Giants first baseman Bill Terry conversed with Landis about the injury to his taped right wrist that took him out of action for a spell.

Giants. Landis loved baseball as much for its honesty as for its home runs, which in those "deadball" days were relatively infrequent. (The introduction, in 1909, of a cork-centered ball and then, in 1920, of the so-called lively ball, which was made with a new kind of yarn that could be wound tighter, resulted in a sharp upturn in home-run production.) "It is a great game this baseball—a great game," he mused. "It is remarkable for the hold it has on the people, and equally remarkable for its cleanness." Yet as crowds flocked to ballparks and gamblers to growing baseball pools, the "great game" was about to be dragged through the mud.

When two of his brothers were elected to Congress, Landis was encouraged to run for office. He declined, but again backed the right horse. After one of his cronies helped Theodore Roosevelt win reelection in

1904, the man recommended Landis to the President for a newly created judgeship in Chicago. Roosevelt acceded to that request. As a federal judge, Landis treated the courtroom as his stage. His sense of justice, while occasionally blind, was never boring. If a lawyer's line of questioning seemed suspicious, Landis would screw up his nose as if smelling an odor. He sometimes bolted out of his seat and pointed his finger at a witness, saying, "Now, let's stop fooling around and tell exactly what did happen, without reciting your life history." And once when an old felon protested that he'd never finish a five-year sentence, the judge scowled and said, "Well, you can try, can't you?"

Murder and mayhem, bribery and fraud, each case gave "The Squire" a reason to be righteous. But he might have remained as anonymous as most other federal judges had it not been for *United States v. Standard Oil of Indiana*. By 1907 Standard Oil of New Jersey controlled 85 percent of the country's refined oil and was the nation's most hated trust. In Landis' courtroom, its subsidiary, Standard Oil of Indiana, stood accused of colluding with the railroads and using its huge volume to obtain lower rates. When Standard's lawyers dodged questions, Landis furiously subpoenaed top officials, including the president John D. Rockefeller himself. Rockefeller's lawyers tried to argue that the 67-year-old magnate was too frail to testify, but Landis thundered, "This court is no respecter of wealth or other claims of immunity!"

Saturday, July 6, 1907, was a hot, humid day in Chicago but a great day for a baseball game. Both the Cubs and Chicago's other professional team, the White Sox, occupied first place in their respective leagues. The Cubs were out of town, but the Sox were hosting Connie Mack's Philadelphia Athletics. Landis couldn't attend because he had a rendezvous with the richest man in America. Just before 10 A.M., hundreds gathered outside Landis' courtroom. "Here he comes!" someone shouted. Twenty Chicago policemen cleared a path as, wearing an icy blank stare, Rockefeller arrived for his day in court.

Under Landis' questioning, Rockefeller admitted his company ran "an oil refinery in New Jersey," but granted little more, evading and hesitating while Landis tapped his glasses. When the judge fined Standard Oil of Indiana $29.2 million, more than half the money then coined annually by the federal government, the public was ecstatic. The "frail" Rockefeller, receiving the news on the golf course, coolly drove a ball down the fairway and later remarked, "Judge Landis will be dead a long time before this

He seemed to be at every important game, watching from his box, his head resting on the railing.

fine is paid." He was right. An appeals court overturned Landis' verdict, something that happened frequently.

During World War I, Landis, by then known as a super-patriot, became fiercely intolerant. He lashed out at German-Americans, saying "Their hearts are reeking with disloy-

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Landis mended fences with Babe Ruth, left, and his Yankee teammate Bob Meusel in 1922. Several months earlier, he had suspended both for defying a ban on barnstorming.

alty." In 1918, when members of the Industrial Workers of the World, or IWW (usually referred to as the Wobblies), were accused of draft evasion and other acts of sedition, Landis presided. Ignoring pleas for clemency from Helen Keller and other luminaries, Landis handed out sentences of up to 20 years and imposed fines totaling $2.3 million.

Five years later, President Calvin Coolidge commuted Landis' IWW sentences, but by then the judge had a job in which he could not be overruled. Even before eight Chicago White Sox threw the 1919 World Series, the team was known as the Black Sox. Along with paying baseball's stingiest salaries, Sox owner Charles Comiskey cut his team's laundry budget to the bone, hence the nickname. But as the heavily favored Sox were blowing the Series, rumors flew. The fix was in. An extensive cover-up kept the truth hidden until just before the 1920 Series. That fall, with the game's image tarnished, club owners voted to disband their governing National Commission.

The Black Sox scandal wasn't the owners' only concern. For several years prior to that, political infighting between the leagues had all but nullified the Commission's ability to run things. Baseball was coming close to anarchy and something had to be done. One strong man was needed to run the show, restoring both order and integrity to America's game. Among the candidates were former President William Howard Taft, Gen. John Pershing and Landis. The judge had the inside track because in 1915, he had upheld baseball's reserve clause binding players to teams for life. Now, thinking he was on their side, the owners turned to him.

On November 12, 1920, the most powerful men in baseball entered the courtroom where Landis was presiding over a bribery case. Seated, the team owners talked among themselves. "There'll be less noise in this courtroom or I will order it cleared," Landis boomed. After adjournment, tycoons whose names adorned ballparks—Ebbets, Griffith, Comiskey—entered the judge's chambers with hats in hand. Flattered by the offer to become baseball's commissioner, Landis nonetheless protested that he was "doing important work" on the

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bench. The owners insisted he could do both jobs. For the love of the game, and the dual salary—$7,500 as judge and $42,500 as commissioner—Landis agreed.

Landis began rising at 5 A.M. to work as a federal judge and baseball's jury. He continued until the dual income led to censure by the American Bar Association and the threat of Congressional impeachment. In March 1922 he resigned from the bench to devote all his time to baseball.

Nearly a year after the Black Sox scandal broke, all eight players were acquitted. Then it was Commissioner Landis' turn to overrule. "Regardless of the verdict of juries, baseball is entirely competent to protect itself against crooks, both inside and outside the game," he declared. Whether a player had taken $35,000, as had "Chick" Gandil, or had taken no money and thrown no games, as was the case with Buck Weaver, mattered little to Landis. He banished all eight men for life.

Players who flirted with the jazzier side of the Jazz Age could expect no mercy from the judge.

That was just the beginning of the judge's housecleaning. Landis loathed gamblers, those "vermin" who would "sell out their mothers or the Virgin Mary." They were bent on getting "their slimy fingers around baseball," he said. "But by God, so long as I have anything to do with this game, they'll never get another hold on it." Over the next four years, he blacklisted 7 other players and suspended 38 more. A few had thrown games but most, like Weaver, had merely been approached by gamblers, then failed to tell their team. Landis banished a New York Giants' pitcher for "treachery" after the man wrote a letter suggesting he was open to a fix. He ordered owners to sell any financial interests in racetracks, and years later, when crooner Bing Crosby tried to buy an interest in the Pittsburgh Pirates, Landis turned him down because he owned racehorses.

Players who flirted with the jazzier side of the Jazz Age could expect no mercy from the judge. One example was Benny Kauff. The New York Giants outfielder wore gaudy diamond rings, drove the kinds of cars usually owned by gangsters and often carried thousands in cash. He played the 1920 season under indictment for grand theft auto. No one seemed to

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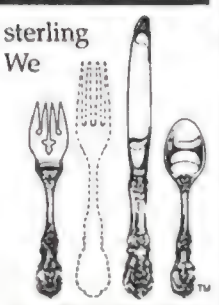

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mind—until Landis became commissioner. Come spring, Kauff made the long trek from the Giants' training camp in San Antonio, Texas, to Landis' Michigan Avenue office. There Landis suspended Kauff until his auto-theft trial. When a jury acquitted the outfielder, Landis reviewed the case himself. "The acquittal smells to high heaven," he said. Kauff never played baseball again.

Banning a .274 hitter was one thing. But would the new commissioner have enough stature to take on the Sultan of Swat himself? It can be argued that no player has ever had a better season than Babe Ruth had in 1921. He hit more homers, 59, than eight entire *teams* had that year. He also set records for extra base hits, total bases, runs, and runs batted in, some of which still stand. By season's end, Ruth's name had appeared in American newspapers more often than anyone's except President Harding's. When Ruth booked a number of postseason exhibition games to cash in on his fame, Landis upheld a longstanding ban on such barnstorming by World Series players.

Landis slammed down the phone, shouting, "Who the hell does that big ape think he is?"

Summoned to the judge's office, Ruth refused to show, then called to tell Landis he was heading to Buffalo to play ball. Landis slammed down the phone, shouting, "Who the hell does that big ape think he is?" Ruth's reply? "Aw, tell the old guy to go jump in a lake." After Ruth went ahead, Landis fined him his entire World Series share and suspended him for the first six weeks of the 1922 season. When the two met in spring

The commissioner testified in Congress about a bootlegger who had evaded a sentence Landis imposed while a judge.

training, Ruth asked for a pardon; he got a two-hour lecture instead. "He sure can talk," Ruth said, but he never crossed the judge again.

Wayward players felt the judge's holy wrath, but others found him paternal. Despite his lordly status, Landis always addressed players formally as gentlemen—Mr. Gehrig, Mr. Hornsby, Mr. Cobb—and watched over them like a hen watches over her chicks. When players had personal problems, Landis helped them. He once sent an aide to take the great pitcher Grover Cleveland Alexander, a binge-drinking alcoholic, home to his family. When Landis heard that a player he had banished was nearly indigent, he sent the man a personal check. "He was always on the side of the ballplayer," Leo Durocher recalled. "He had no use for the owners at all. 'Don't worry about them,' he would tell me, 'They're not out to help you. You know where your friend is. Right here. I'm your man.'"

Players and fans loved Landis, but others did not. The powerful American League president Ban Johnson resented Landis' absolute authority

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THE TERROR OF THE CROOKS

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When Landis fined Standard Oil of Indiana nearly $30 million for monopolistic practices, he became a national figure. The press hailed him as "a fearless champion of justice."

and schemed against him. Finally, Landis, who always carried a letter of resignation in his pocket, threatened to quit unless Johnson did. The owners backed Landis.

The judge's arbitrary decisions baffled sportswriters. Why did he ban the Black Sox, then refuse to do the same to Ty Cobb and Tris Speaker when those two stars were accused of throwing a game back in 1919? Johnson suspended Cobb and Speaker, but Landis reinstated them. Public outcry may have swayed his decision, but Landis claimed there wasn't enough evidence. Besieged by other old scandals, he grumbled, "Won't these God damn things that happened before I came into baseball ever stop coming up?" and put a statute of limitations on such cases.

By the late 1920s, Landis, with a little help from his friend Babe Ruth, had restored the luster of the national pastime. In big new stadiums, attendance was soaring. Baseball's number-one fan was Landis himself. He seemed to be at every important game, watching from his box, his head resting on the railing, his snow-white hair signaling his presence like a beacon. He rarely spoke, just watched and scowled, like an eagle casting a cold eye down from his aerie. Here was Landis at the World Series in Yankee Stadium. There was Landis dedicating minor-league parks in Montreal, Columbus, Terre Haute . . . He chose announcers for the Series, lecturing them about the perils of partisanship. He signed every World Series check. Once an official scorer asked if Landis had any advice. "No," the judge replied, "just go

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ahead and score the game in your usual damned incompetent fashion." Yet just as he preserved baseball's integrity, the judge also preserved its timeworn traditions.

During the Depression, owners sought ways to boost sagging attendance. Landis opposed every change. He vowed night baseball would never happen under his watch, but as it turned out he could not stop it. He fought the farm system through which clubs bought minor-league teams to develop their own talent. He upheld baseball's unwritten ban on black players and did nothing to push owners toward integration.

But by the 1940s, pressure was mounting. In 1943 the Pittsburgh Pirates tried to sign Josh Gibson, the legendary slugger who played for the Homestead Grays. Landis put a stop to it. "The colored ballplayers have their own league," he said. "Let them stay in their own league."

The most famous story of his opposition to integration was told by the maverick owner Bill Veeck. According to Veeck, Landis stopped him from buying the Phillies after Veeck told him he planned to sign black players. By the time he got from the judge's office to Philadelphia, Veeck claimed, control of the Phillies had been turned over to the National League and the team was soon sold to another buyer. Yet some now doubt the story. "Veeck may have made it up out of whole cloth, and it has distorted Landis' image tremendously," says veteran sportswriter Robert W. Creamer. "Landis was no angel. He reflected the institutional racism of his times. But he wasn't quite the devil he's been portrayed." Baseball remained segregated until 1947, when the Brooklyn Dodgers' owner, Branch Rickey, signed Jackie Robinson. By then, Landis was no longer watching from his box.

In 1944 the judge missed the World Series for the first time since becoming commissioner. Two days before

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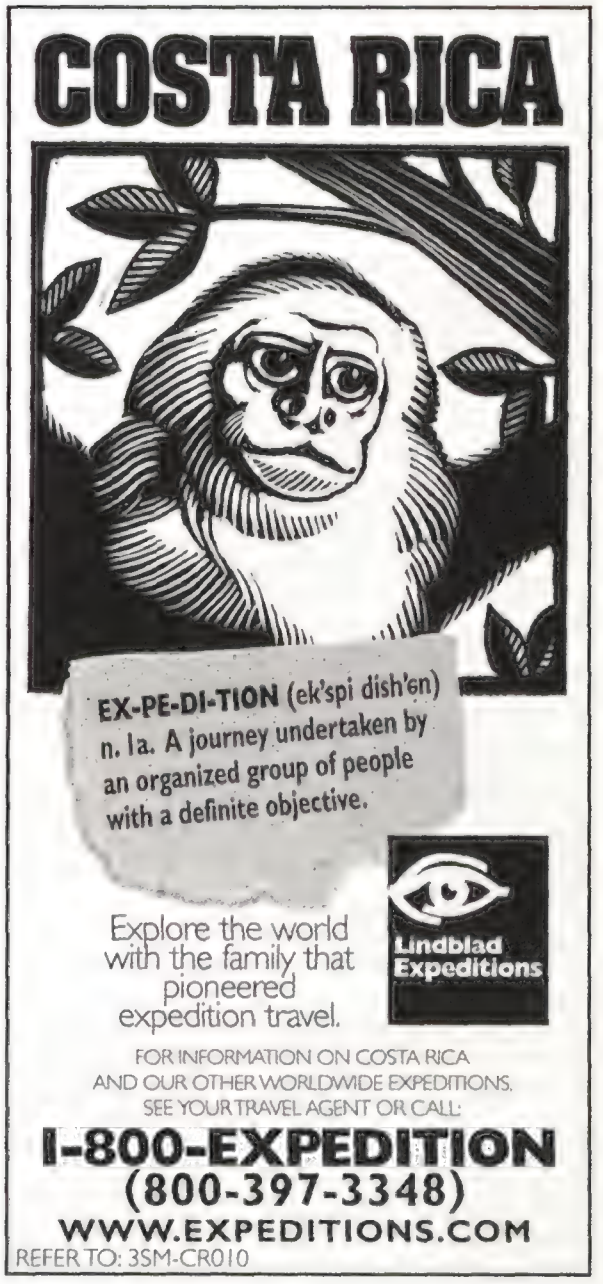
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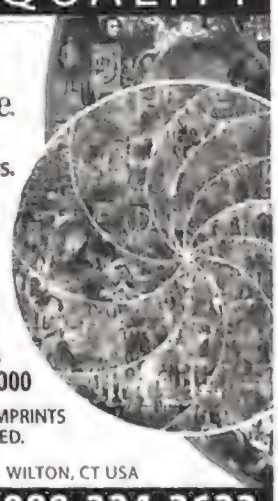

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The judge and his wife, Winifred, beamed proudly when they were reunited with their son, Reed, who was a celebrated flying ace during World War I.

the Series began, he entered the hospital complaining of shortness of breath. At 78, he had survived prostate cancer and chronic respiratory problems, but friends expected he would soon be visiting ballparks again. When he didn't emerge to vote against Franklin Delano Roosevelt, whom he despised, they knew his condition must be serious. In mid-November, the owners renewed Landis' seven-year contract, but a week later the judge died in his sleep. His departure was the least theatrical act of his life. There was no funeral. He was cremated and buried beneath a modest headstone in Chicago. Two weeks later he was given a more fitting memorial when the Baseball Hall of Fame named him a member. His plaque in Cooperstown reads: "His Integrity and Leadership Established Baseball in the Respect, Esteem and Affection of the American People."

Today the judge is remembered for the independence he brought to his office. No subsequent commissioner has measured up to his standards of power and authority. Not long after Landis died, the owners regained ascendancy and have guarded it jealously ever since. Landis' immediate successor, A. B. "Happy" Chandler, a onetime Kentucky governor and U.S. senator, never approached the judge in stature, and when he did begin to exert power on his own, the owners voted him out in a hurry. Every commissioner since has had to pay attention to what the owners want.

These days no one bothers to pretend that baseball is a mere pastime. The "Steves" and "Matts" who replaced the "Leftys" and "Peppers" make more money than any gambler could offer them. Yet in spite of everything—the rampant commercialism, the spitting on umpires, the trash talk and the drug scandals—at least one of the old judge's verdicts on the game's meaning and importance has not been overturned. "Baseball is something more than a game to an American boy," he declared. "It is his training field for life work. Destroy his faith in its squareness and honesty and you have destroyed something more; you have planted suspicion of all things in his heart."

Bruce Watson's collection of humorous essays, Info Aged, *was published last year.*

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BOOK REVIEWS

Faster

James Gleick

Pantheon, $24; Vintage, $14 (paper)

THE OTHER DAY, IN THE MIDST OF a business call, the woman I was talking with said, "Can I put you on hold for just a fraction of a second?" Fortunately, I had been reading James Gleick's *Faster,* so I picked it up to while away the time. Just about everything in life is accelerating, says Gleick.

We now live, Gleick notes, in a world where fast-food restaurants have express lanes; and where we laugh at a comedian saying, "I put instant coffee in my microwave and almost went back in time." Technology both caters to and fosters our acceleration. Gleick offers many examples, including a new option available on telephone answering machines, the quick-playback button. This feature allows for "handling callers who have droned on and on with their shaggy-dog messages." Exactly how, Gleick wonders, "did the manufacturers know you were so busy that you could not stand to listen to your friends speak with normal languor?"

There's less time for reading than there was, Gleick writes: "Your grandparents might have read at least one newspaper in the morning and another in the evening. *USA Today* caters to your more modern reading habits by keeping its copy short. Other newspapers have catered to them by going out of business. . . . Even the *New York Times* altered its traditions to accommodate a time-pressured reading style. Without explicitly repudiating its 'All the

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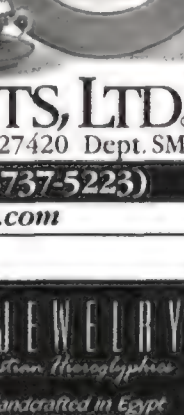

Everywhere Gleick looks, he sees acceleration, and with it comes impatience.

News That's Fit to Print' history, the newspaper began trying out a new slogan, still words of one syllable but fewer of them: 'Read What You Like.'"

How we read is mirrored by how we eat. Gleick describes us as "consumers-on-the-run of brightly packaged superconcentrated protein drinks and foodstuffs: Powerfoods, Soy Delicious! Energy Bars, or Hammer Gel ('endurance fuels' featuring 'protein powder')." A great many of us, he reports, adults and children alike, "eat breakfast on the way to their next activity. . . . Dinner is not far behind on the road to obsolescence. Prepared, prepackaged meals—all descendants of the TV Dinner—now take up more supermarket space than fresh fruits and vegetables. . . . Bouillon cubes came into the world as a leap forward in time-saving. Now, who can spare time to unwrap the foil and heat the water? For that matter, heating water, a process subject to the constraints of physical law, has come to be seen as annoyingly slow. Hence the spread of Instant Hot and Quick & Hot faucets."

Everywhere Gleick looks, he sees signs of acceleration. And with acceleration comes impatience. Elevators offer another case in point: "Although there are still places on earth where people live full lives without ever seeing an elevator, the Otis Elevator Company estimates that its cars raise and lower the equivalent of the planet's whole population every nine days. This is a clientele that dislikes waiting. . . . The fastest passenger ele-

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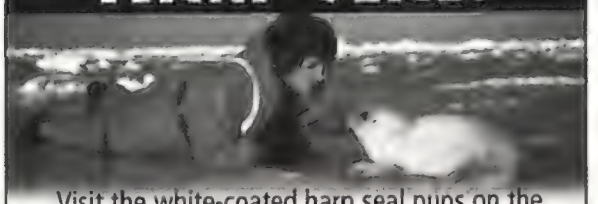

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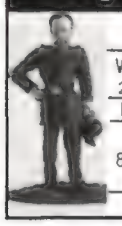

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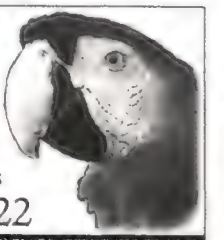

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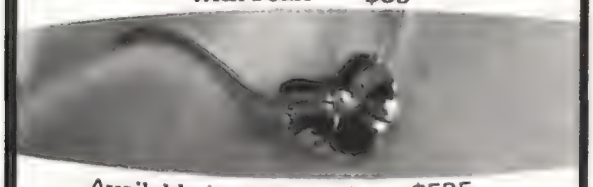
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vators, mostly in Japan, travel at more than thirty feet per second. The record holder in the late 1990s was a special Mitsubishi elevator in a sightseeing tower in Yokohama: more than forty feet per second, a good climb rate for an airplane."

If technology speeds everything up to save time, Gleick ponders, "Where did all this saved time go?" He quotes a typical college syllabus for American Studies: "This course will examine why Americans today work more, shop for longer hours, and have less leisure time than they did in the 1960s." No one seems to have the answer, although there is a growing industry in books on how to simplify one's life, save more time and relax. Who has the time to read them all? Gleick informs us that the CEO of a telecommunications conglomerate has joked about the DayDoubler program all his customers seem to fantasize over: "Using sophisticated time mapping and compression techniques to double the number of hours in the day, DayDoubler gives you access to 48 hours each and every day. . . . "

WHERE DID ALL THE TIME GO?

COULD WE EVER SLOW DOWN, OR even pause to meditate? Gleick seems to doubt it. "When the time comes to be alone with ourselves, we may crave the cellular phone at that," he writes. "Maybe alone with our thoughts, we feel that there just isn't enough to keep us entertained. . . . It turns out to be difficult to travel far without a guide, even through our own familiar selves."

After finishing *Faster,* I walked across the street for a cup of coffee at a local café and met a friend. "How are you?" I asked. "Stressed. How are you?" she replied. When I said I hoped the rest of her day was easier, she was almost defiant: "If I wasn't stressed I'd be bored," she snapped. "I'd hate to be bored!"

Paul Trachtman reviews books from his home in rural New Mexico.

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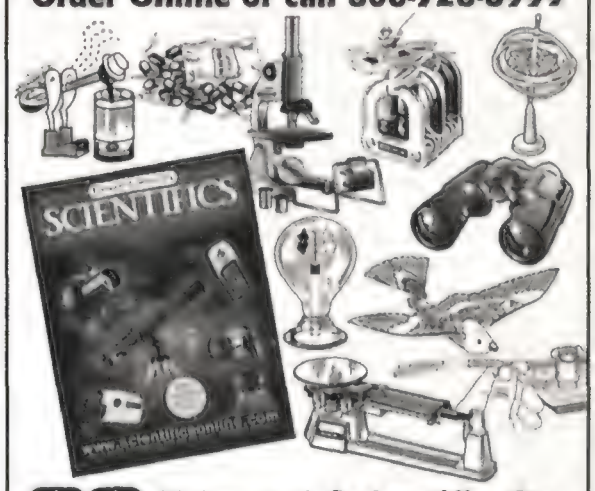

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The Object at Hand [p. 32]

Freight Train and Other North Carolina Folk Songs and Tunes by Elizabeth Cotten, Smithsonian Folkways Recordings (Washington, D.C.), 1989

Volume II: Shake Sugaree, 1967 and *Volume III: When I'm Gone*, 1979 by Elizabeth Cotten, Folkways Records

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Art Nouveau [p. 74]

Art Nouveau 1890-1914 (exhibition catalog), edited by Paul Greenhalgh, Vic-

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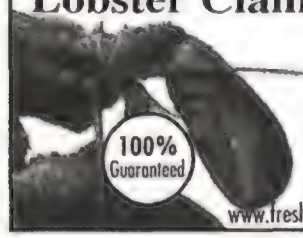

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THE LAST PAGE

The Book That Tells Stories About You

BY JANICE L. KAPLAN

MY FRIENDS STEVEN AND MICHELE were recently transferred to Geneva. In the month before departing, they used three-inch-long plastic pointers to scribble the names, postal addresses, e-mail addresses, fax numbers and cell-phone numbers of their 1,000 or so closest friends into a pair of palm-size "digital assistants." I, on the other hand, registered their Geneva address—using my neatest girls' school handwriting—in the green address book I've owned forever. He is Solomon, she is Klein-Solomon. I put them with the "S's."

The "S" section of my address book fills four pages. Maybe because my friend Kathy alone takes up a page. Her listing extends up and down the page, spilling over into the margins with the assistance of hand-drawn arrows that wind their way around the Shapiros and Shannons and Sands and Sellers. The entries take her on a journey from Brown University student to grassroots organizer in the nation's capital to Princeton grad student, returning her to a historic row house in her native Baltimore.

Grandmother Natalie lives in the "B's" because, after spending half a lifetime in London as one of that city's leading businesswomen, she met Louis Bing, my grandfather, and moved to Cleveland, Ohio, which she always insisted on referring to as "a one-horse town." (It sounds even more insulting when said with a British accent.) Natalie died a decade ago but, in my book, she's still living in Apartment 29H at 118 East 60th Street, across from Bloomingdale's in Manhattan, where she finally moved after convincing Papa it was time to escape from Cleveland.

Back in the "A's" is Michael Allen, a handsome University of Virginia law student who bakes bread from

natural grains, uses a secondhand bicycle for transportation and listens to Bob Marley. In the book, he resides in a group house on Allen Drive in Charlottesville. Never mind that he hasn't been a Virginia-based grad student since 1985, when he moved to Washington, married me, fathered our three kids and bought a house. Natural breads have been replaced by chicken nuggets, Bob Marley by the Backstreet Boys.

There are literally hundreds of entries in the address book, some inconsequential, some for people who have played major roles in my life. There are men I met before Michael: Cavaliere Pietrangelo, whom I encountered on a train while traveling on college break from Florence to Rome; Chris Neugard, with whom I drank tequila in Cancún as the sun set (last known address: Duncanville, Texas).

There is the Mormon girl I shared a room with at summer camp, the rabbi who married Michael and me, and former bosses. "W" turns up the hairdresser I went to throughout my 20s—to whom I told all my secrets—who moved to Seattle. To remove these names would mean leaving behind my childhood, my adolescence and my young-adult years. They conjure up pleasant memories and some I'd rather forget, but none I will ever erase.

Recently my office announced that our conversion to a new computer network will wipe out our electronic address books. Panic doesn't begin to describe the reaction as colleagues scrambled to preserve the names of those near and dear to their PCs. Not me. I had never taken advantage of the network's capabilities. I don't even know what a server is. True confession: I have no electronic address book. So, as the cyberworld comes crashing down on my coworkers, I can rest easy at night secure in the knowledge that 40 years of friendships and family are safe and sound in a dog-eared little volume I keep alongside the instruction manuals next to my home computer.

MICHAEL WITTE

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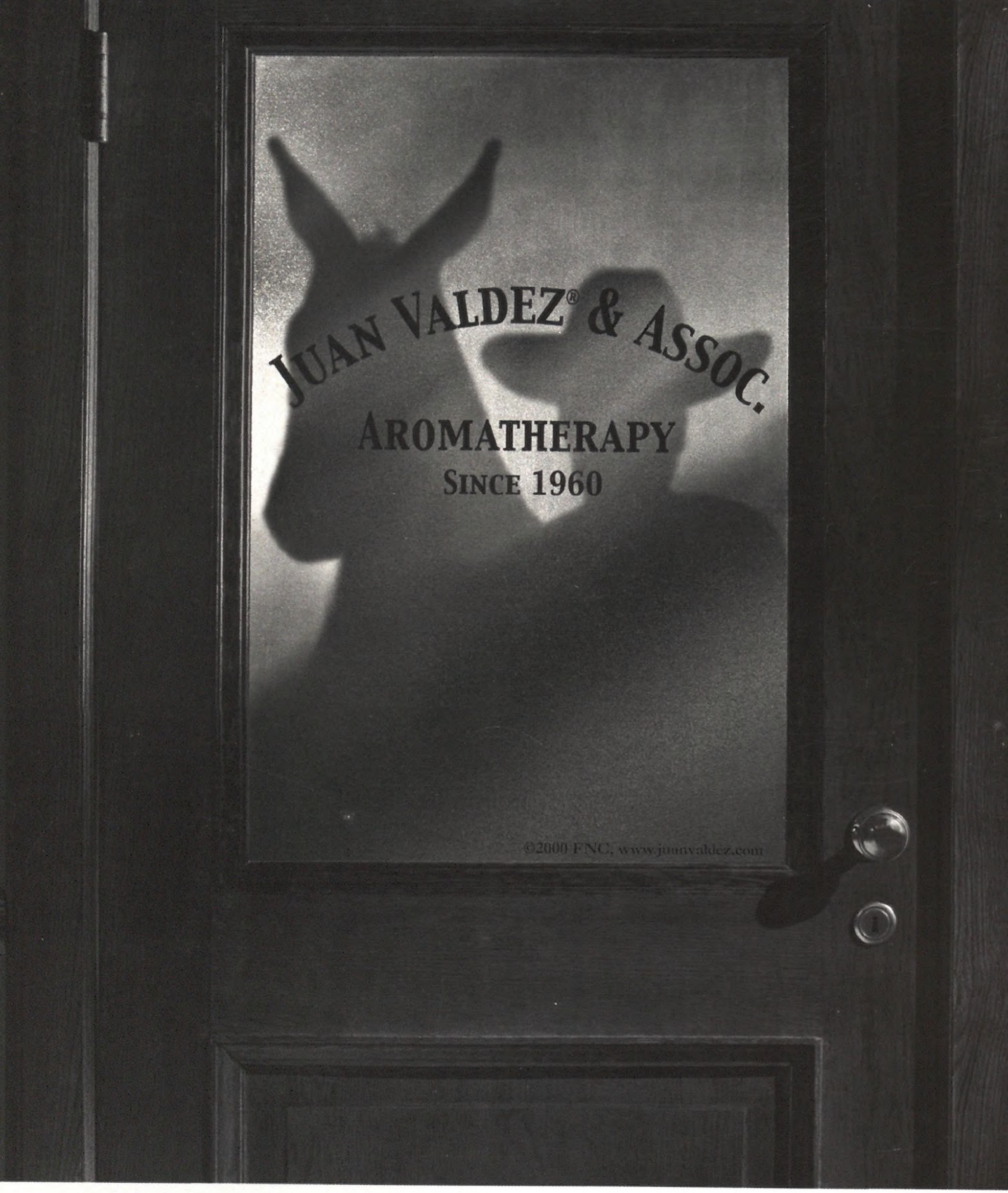

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